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PROSPECTING FOR GOLD.

NINTH ANNUAL REPORT



ON

INTRODUCTION OF DOMESTIC REINDEER INTO ALASKA,

WITH

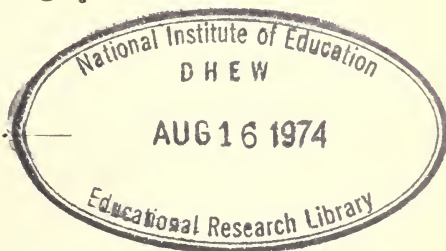
MAPS AND ILLUSTRATIONS,

BY

SHELDON JACKSON, LL. D.

GENERAL AGENT OF EDUCATION IN ALASKA.

1899.



WASHINGTON:

GOVERNMENT PRINTING OFFICE.

1900.

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IN THE SENATE OF THE UNITED STATES,
January 4, 1900.

Resolved, That the Secretary of the Interior be directed to transmit to the Senate the report of Dr. Sheldon Jackson upon "The introduction of domestic reindeer into the district of Alaska" for 1899.

Attest:

WM. R. COX,
Secretary.

LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,

Washington, January 16, 1900.

SIR: I am in receipt of Senate resolution of the 4th instant—

That the Secretary of the Interior be directed to transmit to the Senate the report of Dr. Sheldon Jackson upon "The introduction of domestic reindeer into the district of Alaska" for 1899.

In response thereto I have the honor to transmit herewith a copy of the report indicated in the foregoing resolution, together with its accompanying maps and illustrations.

Very respectfully,

E. A. HITCHCOCK,
Secretary.

THE PRESIDENT OF THE SENATE.

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NINTH ANNUAL REPORT
ON THE
INTRODUCTION OF DOMESTIC REINDEER INTO ALASKA.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION, ALASKA DIVISION,
Washington, D. C., December 30, 1899.

SIR: I have the honor to submit to you my Ninth Annual Report on the Introduction of Domestic Reindeer into Alaska.

The year covered by this report has been one of many changes and stirring events.

The 67 Laplanders, Finns, and Norwegians and their families who were brought from arctic Norway in connection with the relief of destitute peoples in the mining regions of Alaska arrived at the Eaton Reindeer Station, Unalaklik, July 30, 1898, and on the 31st of January, 1899, they were transferred from the care of the War Department to that of the Interior. Thus there was an unusually large number of employees during the year in connection with the reindeer herd. The discovery and opening of the Cape Nome gold mines caused a sudden demand for transportation. The services of all the trained reindeer were required, both of the Government and mission herds in the vicinity. The fulfillment of the Government pledge to return to the American Missionary Association mission at Cape Prince of Wales and to Antisarlook and other Eskimo owners the reindeer which had been borrowed by the Government in January, 1898, to carry food to the ice-imprisoned whalers at Point Barrow required the return to those several parties of 934 head of reindeer. To meet this large demand Congress made a special appropriation of \$20,000 for fitting out, under the auspices of the Treasury Department, for the use of the Interior Department, the naval vessel *Thetis*, in order that said vessel might give her whole time to the transportation of reindeer from Siberia. Through the courtesy of the Treasury Department the United States revenue cutter *Bear* was also allowed to give some time to securing reindeer. Further arrangements were made with the firm of J. S. Kimball & Co., San Francisco, to procure and deliver reindeer in Alaska for the use of the Government.

These several enterprises have made the year just closed one of great interest and activity.

PERSONNEL.

Mr. William A. Kjellmann remained as superintendent.

Mr. Hedley E. Redmyer, in charge of the special expedition for driving reindeer from Haines Mission, on the southeast coast of Alaska, across the country to Circle City, having, after great hardship and much personal danger, fulfilled his mission, resigned October 10, 1899.

F. H. Gambell, M. D., remained at Eaton Station as surgeon and school-teacher, and, during the long absences of the superintendent, as acting superintendent looked after transportation and other interests between St. Michael and Nome.

Herders.—On the 30th of July, 1898, 67 Laplanders, Finns, and Norwegians, with their families, reached the Eaton Reindeer Station. This large number would have been required if the original project of taking food during the winter of 1898 into the Yukon Valley for the relief of destitute miners had been carried out, but, when happily it was found that this measure of relief was not needed and the project of taking relief was abandoned, there was a larger number of employees on the hands of the Government than was needed. A request was made by the contractor for carrying the mail on the Yukon Valley, also by one of the large transportation companies, for permission to hire a number of these extra Lapps. Through a combination of circumstances both the mail contractor and the transportation company failed to carry out their intentions. In the meantime their contract with the Government expired on January 31, 1899, and receiving their discharge from the service of the War Department they went to the placer mines near Cape Nome, where the larger number of them secured mines. One of them, Mr. Jafeth Lindeberg, is reported to have taken from his mine over \$75,000 in gold. One of Mr. Lopp's Eskimo herders at Cape Prince of Wales discovered gold on Anacovak Creek, which was the commencement of the new mining district of Konowgok, a few miles from Cape York, on the Bering Sea coast. They left the station for the mines at Golovin Bay and Cape Nome as follows:

July 31, 1898.—Jafeth Lindeberg.

February 1, 1899.—Berit Nilsdatter Eira, Ida Johansdatter Hatta, and Magnus Kjeldberg.

March 1.—Thoralf Kjeldberg, Wilhelm Basi, Otto M. Leinan, and Ole G. Berg.

March 4.—Samuel Hansen and Otto Greiner.

March 10.—Ole Johansen Stenfjeld.

March 20.—Ole Keogh.

March 27.—Lauritz Larsen and Ole Olesen.

March 28.—Johan Peder Johannsen Stalogargo.

March 31.—Karl O. Suhr and Johannes Aslaksen Rauna.

April 1.—Peder Johannesen, Samuel Josefsen, Peder Johansen, Iver Persen Vestad, Lauritz Stefansen, Johan M. Johansen (Toerle), Nils Klemetsen, Ole M. Rapp, Rolf

Wiig, Mathis Klemetsen (Nillokka), Ole Klemetsen Hatta, Alfred Salamonsen Nilima, Samuel Johannesen Balto, Isak Johannesen Hatta, Hans Samuelsen, and Johan Hilmar Hansen.

April 7.—Karl Johan Sacariasen.

May 1.—Olai Paulsen.

May 15.—John Andersen.

June 10.—Isak Salamonsen Nikkila.

June 15.—Emil Kjeldberg.

June 30.—Peder Berg.

July 31.—Jeremias Abrahamsen.

September 1.—Klemet Persen Boini and Anders Allaksen Bar.

September 20.—Hans Andersen Siri.

October 10.—Hedley E. Redmyer.

The following remained in the employ of the Government:

Nils Persen Bals, wife and 1 child; Alfred Hermansen and wife; Ole Olesen Bahr, wife and 2 children; Nils Persen Sara, wife and 4 children; Anders Johannesen Balto, wife and 2 children; Per Andersen, wife and 1 child; Johan Nango, wife and 1 child; Aslak Johnsen Bals, wife and 1 child; Nellogotoak (Eskimo), wife and 1 child; Anders Biti and wife; John Eriksen Eira, wife and 1 child; Johan Isaksen Tornensis and wife; Aslak Aslaksen Gaup, wife and 1 child; Johan Petter Rista, wife and 1 child; Per Mathisen Spein, Per Josefsen Porsanger, Lars Larsen Anti, Isak Bongo, Isak Tornensis, Ole Olesen Pulk, Nils Klemetsen, Anders Persen Utzi.

In addition to those at Eaton Reindeer Station there were in charge of the herd crossing the country from Haines Mission to Circle City Messrs. Hedley E. Redmyer, Klemet Persen Boini, Anders Aslaksen Bar, Hans Andersen Siri, Per Nilsen Siri, Per Johannesen Hatta.

In charge of the herd at Point Barrow and Point Hope were Messrs. Lars Larsen Hatta and Jacob Larsen Hatta, wife, and two children.

At Point Clarence was Mr. Per Larsen Anti.

RENEWAL OF APPOINTMENT AS SPECIAL AGENT OF THE WAR DEPARTMENT.

As the herders brought from Lapland in 1898 were under contract with the War Department until January 31, 1899, and from that time under the Interior Department, on the 21st of April, 1899, I was appointed by the Secretary of War as special agent of the War Department for the purpose of closing the accounts of the Lapps for salary due under their contract with the War Department for services in connection with the Alaska Relief Expedition. During the following September, through Capt. E. S. Walker, Ninth United States Infantry, commanding the post at St. Michael, the Lapps were paid the salary due them from the War Department in full and receipts were taken.

STATIONS.

Teller Station.—During the absence of Rev. T. L. Brevig from the Teller Reindeer Station I have placed Mr. Charles E. Chard in charge of the buildings. Arrangements are in progress by which it is expected that Mr. Brevig will return to the station next summer.

Notwithstanding the demand for transportation to the new mines at Nome, I was able to secure freight on the supplies for the reindeer stations from San Francisco to the Teller and Eaton Reindeer stations at the low rate of \$10 per ton, ship measurement, the prevailing rate being from \$40 to \$60.

Eaton Station.—This station, the location of which was selected in the winter of 1897-98, was not occupied until the fall of 1898. It is situated in a well-sheltered valley on the north bank of the Unalaklik River, about 8 miles from the seashore. During the winter of 1898-99 the logs were cut in the surrounding forest and whipsawed into lumber, from which was erected a large two and a half story main building, a large warehouse with a workshop in the basement, together with six double cabins one and a half stories high for the herders.

School.—School was kept by Dr. F. H. Gambell at Eaton Station, as usual, during the year, and reports indicate greater progress than during any former year. The enrollment consisted of 11 children of the Lapps, with the occasional attendance of the parents, the purpose being to assist the Lapps in acquiring the English language. They are reported to be very apt and quick at learning, and during the dark days of winter would often come to school long before the stars had gone out of sight. The character of the pupils makes the school one of more than ordinary interest.

Medical.—Dr. F. H. Gambell, physician in charge, reports having treated at Eaton Station 106 cases during the year, besides numerous minor ailments, such as bruises, sprains, etc. Eskimos came to him from Kings Island and the Diomedes, hundreds of miles away, by small skin-covered native boats. In the same room have been Indians from a long distance up the Yukon River, with Arctic Eskimos and miners traveling from the mines on the Yukon across to the new-found diggings at Cape Nome.

HERDS.

Eaton Station.—The herd at this place numbered 620 full grown reindeer and 194 fawns. During the summer and winter over 100 animals were broken in and trained to harness. These served last spring the excellent purpose of teams in readiness for the transportation of the troops to the new mines for the purpose of keeping order, the transportation of Lapps, and also provision for the miners. During the summer 96 of the sled deer were left at the Teller Reindeer Station as the nucleus of a herd into which could be placed the reindeer brought over from Siberia. During the fall the herd was depleted by the sending of 328 head to Point Rodney to replace the deer which, in 1898, were borrowed from that station by the Government, so that the herd at this station at present numbers but 419. If it were possible to get a central herd of 5,000 head, the increase would be sufficient to do away with the necessity of further importation from Siberia.

Golovin Bay.—From the 395 reindeer in the joint herds of the Swedish Evangelical Union, and Episcopal societies, and Eskimo apprentices, 9 died during the year and 157 were born, of which 10 died, leaving at the station 533 reindeer. During this winter 159 deer belonging to the Episcopal Society, with 52 deer belonging to Apprentice Moses, will be driven to the mouth of the Tanana, in the Yukon Valley. There the portion of the herd that is trained to harness will be used during the winter in the transportation of the United States mail between Tanana and the Eaton Reindeer Station.

One hundred head of deer loaned to the two societies by the Government in 1895 were returned to the Government in the fall by the societies and sent by the Government to Antisarlook to replace in part those borrowed from him by the Government in January, 1898.

During the scarcity of provisions at Nome and the rush of the miners to that place the herd at Golovin Bay performed very important service in the way of transportation.

Point Rodney.—The herd at this place, numbering 328, belongs to Antisarlook, and was given to him in the fall of 1899 in return for those loaned to the Government in the winter of 1898.

Teller Reindeer Station.—Three hundred of the reindeer at this station belonged to Tautook, Sekeoglook, Wocksock, and Tatpan, Eskimos who had served an apprenticeship of five years at the station.

Cape Prince of Wales.—In August, 1898, 167 reindeer were returned to this station of those previously loaned to the Government. Of this number 11 died during the early part of the winter, leaving 156 in the herd. To this herd were born in the spring 79 living fawns, and during the summer 479 deer were brought to this station, making the 714 head that were required to replace the 292, and their natural increase, that were loaned to the Government in January, 1898. The absence of the herd during the winter of 1898–99, when there was such a demand for transportation to reach the Cape Nome mines, was a loss of several thousand dollars to the Mission Station and the Eskimo herders. The herd at this station is the joint property of the American Missionary Association and five or six Eskimos connected with the mission.

Point Hope.—The herd at this station belongs to Electoon and Ahlook (Eskimos), and numbers 52. It is expected that during the winter 48 additional deer will be furnished the young men from the Point Barrow herd. For various reasons this herd has not done very well during the past season.

Point Barrow.—When in the fall of 1898 the shipwrecked whalers were brought from Point Barrow to the States on the revenue cutter *Bear*, 378 deer were left in the herd that had been driven to that point for food. During the last spring 118 fawns were born to the herd. Three deer were killed by dogs and three by wolves during the season. At the close of the fiscal year there were at this station 500 head of reindeer. Lieut. D. H. Jarvis, commanding the revenue cutter

Bear, during his visit to Point Barrow, arranged for leaving 100 head of reindeer at that point for the Presbyterian Mission, and 25 head for Ojello, an Eskimo apprentice. The rest of the herd is to be driven during the present winter, under the care of Mr. William Marshall, to Cape Prince of Wales or Teller Reindeer Station, leaving 48 head at Point Hope while en route. The total number of domesticated reindeer in Alaska is 2,837, divided into nine herds. Of the 2,837 reindeer 1,159 are the personal property of 19 Eskimos, who have learned the management of reindeer by five years' apprenticeship at the Government reindeer stations.

Number, distribution, and ownership of domestic reindeer in Alaska, 1899.

Point Barrow:		
Presbyterian Mission	100	
Ojello (Eskimo)	25	
Point Hope:		
Electoon (Eskimo)	50	
Ahlook (Eskimo)	50	
Cape Prince of Wales:		
American Missionary Association and several apprentices	714	
Teller Reindeer Station:		
Tautook (Eskimo)	75	
Sekeoglook (Eskimo)	75	
Wocksock (Eskimo)	75	
Tatpan (Eskimo)	75	
Point Rodney:		
Antisarlook (Eskimo)	328	
Golovin Bay:		
Evangelical Mission Union	209	
Okitkon (Eskimo)	26	
Constantine	5	
Eaton Reindeer Station:		
Government	419	
Martin Jacobsen (Eskimo)	23	
Tanana:		
Episcopal Mission	209	
Moses (Eskimo)	52	
En route south:		
Government herd, in charge of William Marshall	327	
Total	2,837	

Increase from 1892 to 1899.

	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.
Total from previous year		143	323	492	743	1,000	1,132	1,877
Fawns surviving		79	145	276	357	466	625	638
Purchased during summer	171	124	120	123			161	322
Imported from Lapland							144	
Total, October 1	171	346	588	891	1,100	1,466	2,062	2,837
Loss	28	23	96	148	100	334	185	
Carried forward	143	323	492	743	1,000	1,132	1,877	

a One hundred and eighty deer killed at Point Barrow for food; 66 lost or killed en route.



MAKING A PRELIMINARY RECONNAISSANCE FOR THE TRANS-SIBERIAN RAILWAY WITH REINDEER PACK TRAIN.

Photo from Wm. H. Jackson.

Of the above the following are the property of the Government: In the herd en route from Point Barrow south, 327; Teller Reindeer Station, 100; Eaton Reindeer Station, 419; making a total of 846.

Congressional appropriations for the introduction into Alaska of domestic reindeer from Siberia:

1894.....	\$6,000	1898.....	\$12,500
1895.....	7,500	1899.....	12,500
1896.....	7,500	1900.....	25,000
1897.....	12,000	Total.....	83,000

Expenditure of reindeer fund, 1898-99.

Amount appropriated.....	\$12,500.00
Supplies for stations.....	5,749.57
Barter goods for purchase of deer.....	6,272.67
Reprinting of report, 1,000 copies, at \$41.06.....	416.43
Copies of 29 electrotype illustrations, at \$0.48.....	14.00
Photographs for use in illustrating report.....	3.60
Balance.....	43.73
Total.....	12,500.00

REINDEER DISTRIBUTION.

Instructions were left with Dr. F. H. Gambell, acting superintendent of reindeer stations, to procure from Golovin Bay the reindeer belonging to the Episcopal mission at the mouth of the Tanana and turn the same over to Mr. N. V. Hendricks, agent of the mission. Further instructions were given to renew correspondence with the Roman Catholics at Nulato and Koserefsky to arrange for the loaning of a herd to the Roman Catholic missions. The Moravian missions on the Kuskokwim were notified that they could receive their loan of reindeer during the fall of 1900, at which time it is also probable that a herd can be loaned to the Friends' mission at Kotzebue Sound.

OVERLAND EXPEDITION.

The reindeer which remained of those which were brought from Lapland by the War Department for the purpose of carrying relief supplies to the destitute miners in the Yukon Valley have been exchanged with the Episcopal mission on the Yukon for an equal number of deer belonging to them at the Eaton Reindeer Station. While bringing the reindeer from Lapland the necessity for such relief passed away, and when the herd arrived in Alaska, not being needed for the original purpose, it was turned over by the War Department to the Department of the Interior, and I was sent, by the direction of the Commissioner of Education, to the Alaska coast to receive the deer for the Department of the Interior and send them across the country from southeast Alaska to Circle City, Yukon Valley

The reindeer were landed from the ocean steamer on the 27th of March, 1898, at Haines, Alaska.

Through a combination of circumstances the military authorities were unprepared to receive and forward the reindeer to the moss pasturage, 60 miles from the coast. While these preparations were in progress the deer were delayed at this point without moss until the 15th of April, during which time 362 of the herd died. At this time the remaining deer were transferred by the War Department to the Department of the Interior, and on the 6th of May following, after great hardships, I succeeded in reaching the moss pastures with 185 reindeer out of the 526 that were landed at Haines.

From this time the deer were placed in charge of Hedley E. Redmyer, assisted by six Lapps, to be driven, when they should regain their strength, across the country to the neighborhood of Circle City, in the Yukon Valley.

On the 1st of September Mr. Redmyer had reached Lake Kukshu, Northwest Territory, with 144 reindeer, 41 of the 185 with which he started having proved too weak to recover their strength and died on the way. Of the 144 remaining on the 1st of September, 3 subsequently died from exhaustion. The balance of the herd (141) had regained their health and strength and were in good condition.

On the 28th of February, 1899, the expedition safely reached Circle City and went into camp with 114 reindeer. Of the 30 deer lost by the way, some met with accidents and were killed; a few were killed by wolves; a few that had strayed from the herd were shot by the natives, mistaking them for caribou; a few strayed away and were not recovered.

Mr. Redmyer kept a diary in which he graphically narrates the hardships and difficulties encountered in driving across an unknown wilderness without roads or trails or guide. He states that often a wolf or mountain lion would appear and cause a stampede of the herd and compel the Lapps to chase them through miles of unbroken snow, woods, and underbrush before they could be gathered together for another start. Again and again, coming to ranges of mountains too precipitous to be crossed, the expedition was compelled to retrace its steps and try another route; again and again, through the delays, provisions ran out and the men were threatened with starvation; they were often compelled to lie down to sleep in wet clothing, which froze upon their bodies; but notwithstanding all these difficulties and hardships the expedition was carried through successfully, and the reindeer proved their ability to make a journey that could not have been made either with horses or dogs.

During the spring and early summer, at the request of the United States Army officers stationed at Circle City, two or three distant military explorations were made with the reindeer.



HERD REINDEER, POINT BARROW, ALASKA.

Photo by S. J. Call, M. D.



GROUP OF FAWNS, POINT BARROW, ALASKA.

Photo by S. J. Call, M. D., Surgeon of U. S. Revenue Cutter *Bear*.

To avoid the expense of driving the herd from Circle City to the Eaton reindeer station, 1,000 miles westward, I exchanged the herd with the Protestant Episcopal mission at the mouth of the Tanana River for an equal number of deer owned by that mission. The deer belonging to the Episcopal mission were at Golovin Bay, from which place they were proposing to remove them to the mouth of the Tanana, 800 miles eastward.

This exchange was consummated on the 1st of September, 1899, and the reindeer received from the Episcopal mission at Golovin Bay were driven to Point Rodney, 80 miles to the west, to help replace the herd which in the winter of 1897-98 the Government had borrowed from Antisarlook for the rescue of the whalers at Point Barrow.

PURCHASE OF REINDEER IN SIBERIA.

On the 7th of July, in Baroness Korfg Bay, Kamchatka, 116 reindeer were purchased and taken on board the *Bear* by Lieut. D. H. Jarvis, commanding. The journey of 900 miles from Kamchatka to Cape Rodney proved to be a stormy and rough one, and a large number of the fawns died en route. Upon reaching Cape Rodney, July 13, the surf was found too rough for landing, and on the 14th anchor was hoisted and the *Bear* went to Port Clarence for shelter. That evening 83 deer were landed at Cape Riley, near Port Clarence, from which point they were to be driven from 40 to 60 miles across the peninsula to Antisarlook, at Cape Rodney. On July 18, 14 deer were landed at Cape Spencer from the revenue cutter *Thetis*, Lieutenant Buhner commanding. These deer also were to be driven to Antisarlook.

On the 27th of July 15 male and 90 female reindeer were landed from the steamer *Albion* at Cape York, Alaska, for the herd of the American Missionary Association, and 67 reindeer were subsequently landed at the same place from the revenue cutter *Thetis*.

REINDEER AND MAIL SERVICE.

Since the beginning of the introduction of domestic reindeer into Alaska I have kept steadily before my mind the fact that sooner or later the reindeer would prove a very important element in the rapid transportation of the mail in winter over the frozen tundra of arctic and subarctic Alaska, between the widely separated mission stations and isolated mining camps of that region. When, therefore, in the spring of 1898 it was announced in the press that the herd of reindeer which had been brought from Lapland for the purpose of carrying freight and food to the mining regions of the Yukon Valley for the relief of the destitute miners would not be needed for that purpose and were for sale, Mr. P. C. Richardson, the contractor for carrying the mail through the Yukon Valley, immediately telegraphed me,

March 16, 1898, that he wanted me to reserve him 100 head of reindeer and all the Lapp drivers that could be spared by the Government. In the following June I was waited upon by Mr. Richardson and Mr. Emerson, his associate, with the proposition that the Government should not only sell them the reindeer needed to carry the mail on the Yukon, but also that Mr. William A. Kjellmann, superintendent of the reindeer stations, be allowed to take charge of the carrying of the mail between St. Michael and the mouth of the Tanana. As the Government had been waiting for an opportunity to give a practical test of the utility of the reindeer in mail transportation, I agreed to their proposition. Through a combination of circumstances Mr. Richardson failed to meet Mr. Kjellmann during the summer at St. Michael or the Eaton reindeer station and consummate the arrangement.

In the spring of 1899 the North American Transportation and Trading Company, which had secured a contract for carrying the mail from St. Michael to Kotzebue Sound and Golovin Bay, sublet the same to Mr. Kjellmann, of the reindeer station. About the same time Mr. Richard Chilcott, of Seattle, secured a contract for carrying the mail from Valdes to Circle City, Alaska, and at the suggestion of the Postmaster-General made application for a few reindeer for transportation purposes. His agents delayed so late last fall in consummating the agreement that the reindeer which the Government had to sell for that purpose were otherwise disposed of.

During the summer the new gold mines in the neighborhood of Cape Nome had proved so rich that a large population had been attracted to the vicinity. In order to furnish them with a winter mail, the Post-Office Department entered into a contract with Mr. William A. Kjellmann to carry the mail during the winter semimonthly between Eaton Reindeer Station and Nome City.

REINDEER TRANSPORTATION OF TROOPS.

The failure to complete arrangements during the summer of 1898 between Mr. Richardson, the mail contractor, and Mr. Kjellmann, in charge of reindeer, was providential. Late in the fall gold mines were discovered on Snake River, near Cape Nome, Alaska, and during the winter there was a stampede to the new mines from St. Michael, Kotzebue Sound, and the mining districts on the Lower Yukon that received the information. The influx of a large population into a region where there was an insufficiency of supplies and shelter required the presence of United States troops to preserve the peace. An application was made by Captain Walker, in command of the camp at St. Michael, to Mr. Kjellmann for transportation, in response to which Lapps and reindeer were sent from Eaton Station to St. Michael, and transported troops, with their tents, rations, and camp equipage, from

St. Michael to the Golovin Bay mining region. When there was no longer any need for their presence at Golovin Bay the Lapps and reindeer returned the soldiers to St. Michael without accident or difficulty. If the reindeer had been engaged in the mail service they could not have performed the transportation thus unexpectedly required of them.

REINDEER TRANSPORTATION.

In order to further demonstrate the possibilities of reindeer transportation, and as an act of humanity and relief to the crowd of miners that had flocked into the Cape Nome region and were short of provisions, the reindeer station agreed to transport a limited amount of food from St. Michael to Nome, which was done, and payment was rendered for the same by the transportation companies, by furnishing necessary food supplies to the station.

THE REINDEER AS A PACK ANIMAL.

During the summer Mr. Hank Summers, for fifteen years a miner and prospector in Alaska, and secretary of the Pioneer Association of the Yukon Valley, procured the loan of a reindeer from one of the mission stations. Upon this deer he packed his tent, blankets, provision, and tools during the entire summer. When not engaged in packing, his reindeer was picketed out, and everywhere found the reindeer moss—its natural food. Mr. Summers has had many years of long and painful experience in packing provisions on his back, and worrying with dog teams. After the experience of the summer's prospecting with a pack reindeer he testified at the close of the season, "I can not say too much in praise of the reindeer; they are a decided success; I have never found anything so useful for packing or for food as the reindeer."

REQUESTS FOR REINDEER.

In the contract made between the War Department and the Laplanders, on February 1, 1898, was a clause that, after two years' service, such of the Laplanders as might wish it could have a loan of 100 head of reindeer for from three to five years, at the end of which time they would return the 100 head of deer to the Government, retaining the increase as their private property. Several of the Laplanders have made such requests for the season of 1899. Nearly all of them desired to secure herds for themselves and go into the business of raising reindeer in Alaska, considering it a much more remunerative field for that industry than Lapland.

I have also received a petition from a number of miners in the region of Kotzebue Sound, who were so impressed by the destitution

of the natives with whom they were surrounded, and of the relief that would be afforded by the introduction of domestic reindeer in that section, that they asked that the reindeer might be thus introduced.

A request has also been received from missionaries in Alaska connected with the Swedish Evangelical Union Mission for the privilege of purchasing \$20,000 worth of domestic reindeer for the purpose of introducing them among the native adherents of their mission stations.

REINDEER ATTRACTING ATTENTION IN CANADA.

The success of the United States Government's introduction of reindeer into Alaska has attracted the attention of thinking minds in Canada, and a public sentiment is growing in favor of a movement on the part of the Canadian Government to introduce the reindeer industry among the Eskimo population in the regions of Hudson Bay, Great Slave Lake, and in fact the whole of arctic and subarctic Canada, so that it will not be necessary to feed them at public expense, on account of the growing scarcity of food supplies in that section.

REINDEER FOOD.

During the year interesting letters were received through the State Department from Mr. Victor Ek, vice and acting vice-consul at Helsingfors, Russia; Edward D. Winslow, consul-general at Stockholm, Sweden, and W. R. Holloway, consul-general at St. Petersburg, Russia, with reference to the natural food of the reindeer in their respective sections of the country.

RETURN OF REINDEER TO THE AMERICAN MISSIONARY ASSOCIATION, ANTISARLOOK, AND OTHERS.

On January 20, 1898, Lieut. D. H. Jarvis, R. C. S., in charge of the relief expedition to the ice-imprisoned whalers at Point Barrow, borrowed from Antisarlook, an Eskimo living near Point Rodney, Alaska, 133 reindeer; and on January 25, from Mr. W. T. Lopp, at Cape Prince of Wales, representing the American Missionary Association, 292 reindeer, making a total borrowed for the Government of 425. These reindeer were loaned to the United States Treasury Department with the understanding that they were to be replaced in the summer of 1898, together with the estimated increase in the herd for the coming season, and if for any cause they were not returned during the season of 1898, that the increase of the following years until the debt was paid be also taken into account.

In the summer of 1898 there were due, under the above arrangement, to the American Missionary Association 432 reindeer and to Antisarlook 213, making a total of 645 to be replaced by the Government. The Government, however, was unable to procure during the



TEAM OF REINDEER, MORAVIAN MISSION STATION, BETHEL, ALASKA.



TRAVELING WITH REINDEER.



season but 159, which were given to the American Missionary Association at Cape Prince of Wales. The delay in replacing the full number of deer required still further obligated the Government to take into account the natural increase during the spring of 1899. This increased the number to be paid to the American Missionary Association to 714, less the 159 delivered in 1898, and to Antisarlook 328, aggregating 1,042 head for which the Government is liable. This is a striking illustration of the rapidity of increase of the herds. In January, 1898, 425 were loaned to Mr. Jarvis, and in July, 1899, two fawning seasons having intervened, 1,042 head were required to cancel the obligations of the Government to the above-named parties. This was so large a number it was felt that unusual preparations should be made for securing a largely increased importation over that of previous years, when the greatest number procured has been less than 200 head in any one year. Accordingly, on the 24th of January, 1899, the Commissioner of Education addressed a letter to the honorable the Secretary of the Interior, which was duly transmitted to the honorable the Secretary of the Treasury, requesting that instructions be issued to the commanding officer of the revenue cutter *Bear* authorizing him to receive on board the general agent of education in Alaska, and proceed to cruise along the coast of Siberia northward for the double purpose of securing additional information with regard to Siberian herds of reindeer and for the purchasing of the reindeer. In reply the honorable Secretary of the Treasury stated that owing to the increase of business in Alaskan waters caused by the present mining excitement the *Bear* would be unable to devote the time necessary to the work of obtaining the reindeer, and suggested that Congress be asked for an appropriation for fitting out the naval vessel *Thetis*, which had been condemned as unserviceable for naval duty and yet would be seaworthy for a trip like the one proposed. Accordingly the Secretary of the Interior, with the cooperation of the Secretary of the Treasury, applied to Congress for an appropriation of \$20,000 for the fitting out and support of the *Thetis* for this season's cruise in Alaskan waters. This appropriation was granted and the *Thetis* was placed in commission.

On the 1st of May, when we were expected to sail from San Francisco, steam being got up, it was found that the boiler tubes were leaking badly and that it would be necessary to replace them before proceeding; these repairs were at once ordered by the Treasury Department. These repairs, however, would delay the sailing of the vessel so long that it would be impossible to make the trip proposed to lower Kamchatka, and the cutter *Bear*, that was ready to sail, was substituted for the *Thetis* between Petropavlovsk and Bering Straits.

To still further increase the number of deer purchased, and as the coast to be visited was much greater than any one vessel could efficiently inspect during the few months that those shores would be free

from ice, I further arranged with J. S. Kimball Company, San Francisco, to purchase, in behalf of the Government, all the female reindeer they would deliver on the coast of Alaska during the season. Through the combined efforts of the three vessels we secured during the season 322 reindeer. This left 485 head of reindeer to fully settle up the obligations of the Government to the American Missionary Association and to Antisarlook, and these 485 reindeer were taken from the Government herd at the Eaton Station.

REVENUE-CUTTER SERVICE.

As in former years, so in this, the Treasury Department, through its division of the Revenue-Cutter Service, has rendered hearty cooperation and valuable assistance; indeed, it would have been practically impossible for me, without the transportation of a revenue cutter, to have visited the coast of Kamchatka, whereby I secured valuable information with reference to the supplies of reindeer from that section of Siberia; also without their assistance it would have been impossible to procure and transport the large number of reindeer that were obtained during the season.

The instructions to the commanders of the cutters of Capt. C. F. Shoemaker, R. C. S., Chief of the Revenue-Cutter Service, expressed his special interest in the successful securing of a large number of reindeer. The same interest was also manifested by Lieut. D. H. Jarvis, R. C. S., commanding the *Bear*, and Lieut. A. Buhner, R. C. S., commanding the *Thetis*, together with their officers and men in the execution of the above instructions. The carrying out of the details of procuring, loading, and landing the reindeer was made the special duty of Lieut. E. P. Bertholf, R. C. S., on the *Bear* and of Lieut. H. G. Hamlet, R. C. S., on the *Thetis*. I was also indebted for valuable assistance to Capt. W. C. Coulson, R. C. S., commanding the cutter *McCulloch*, and Capt. W. F. Kilgore, R. C. S., commanding the cutter *Perry*.

ITINERARY.

Under your instructions I left Washington on April 25, 1899, spending the following Sabbath at Salt Lake and arriving at San Francisco, the 2d day of May.

The revenue steamer *Thetis*, upon which I was expecting to journey, was under instructions to sail on the 2d of May. In getting up steam it was found that the boiler tubes leaked badly. Capt. C. L. Hooper, R. C. S., in charge of the repairs of the revenue cutters, immediately telegraphed the Treasury Department for permission to put in a new set of boiler tubes, which was granted. As this would detain the *Thetis* for a month and would prevent my visiting the coast of Kamchatka



WOODLAND REINDEER, NORTHERN NEWFOUNDLAND.
From Col. Cecil Clay, Chief Clerk Department of Justice, Washington, D. C.



to confer with the general manager of the Russian Sealskin Company, of St. Petersburg, with regard to the purchase of reindeer, I at once telegraphed, asking that the cutter *Bear*, which was ready to sail, might be substituted for the *Thetis* on the trip to Kamchatka, and that I might join the *Thetis* at Bering Strait, which vessel would then engage for the rest of the season in the transportation of reindeer. Through the kindness of the honorable the Secretary of the Treasury and the hearty cooperation of Captain Shoemaker, R. C. S., Chief of the Revenue-Cutter Service, this request was granted, and instructions were sent to the commanding officer of the *Bear* to receive me on board and convey me to Kamchatka and then coast northward along the Siberian coast until the *Thetis* should be met in the neighborhood of Bering Strait.

The *Bear* sailed from San Francisco for Seattle on the afternoon of the 5th of May. On the 8th, having completed arrangements with Capt. B. Cogan for the transportation of freight and supplies to the reindeer stations on Bering Sea, also with the J. S. Kimball Company for the purchase of reindeer, I took the train for Portland that evening.

On May 10, at the request of the Secretary of War, I called at the First National Bank, of Portland, Oreg., and completed arrangements for the payment of the salaries of the Lapps upon my arrival in Alaska. I reached Seattle the same evening.

On the 12th of May the *Bear* arrived at Seattle and found orders to wait the arrival of dispatches from Washington. This meant a week's delay in Seattle. In the meantime Capt. Francis Tuttle, R. C. S., commanding the *Bear*, receiving news that his wife was dangerously ill, telegraphed to the Treasury Department asking to be relieved from the command of the *Bear* and allowed leave of absence to return to his family. This resulted in another week's delay, while a captain could be sent out from the Atlantic coast.

On the evening of May 24 Lieut. David H. Jarvis, R. C. S., the hero of the Point Barrow relief expedition, arrived in Seattle to take the command of the *Bear*, which he did on May 25.

At 9.45 on the morning of the 26th the *Bear* raised anchor and steamed away from Seattle. That night was spent at anchor at Port Townsend.

On the morning of the 27th, a gale raging outside of the Capes, the captain delayed starting until the afternoon. At 2.20 o'clock we got under way for Unalaska, in the Aleutian Islands.

The morning of June 5 we raised land. At 3.15 a. m. Mount Shishaldin, 8,953 feet in height, was sighted, clean-cut and beautiful against the horizon, covered with a mantle of snow from peak to base. A cloud of vapor was floating lazily from the crater. At 6.30 Pogromnoi volcano, 5,875 feet high, came in sight. During all the forenoon,

which was bright and sunny, with a smooth sea, we skirted the southern shore of Tigalda, Akutan, and Avatabak islands, standing for Unalga Pass. Akutan Volcano stood out clear and cold, covered with an unusual amount of snow. The crater is not at the highest point, but upon the eastern shoulder of the mountain. Its location was plainly marked by a large black spot on the snow, made by the snow being melted away from the warm rocks that formed the rim of the crater. On the west shoulder of the volcano a large pile of perpendicular rocks, forming a small mountain of themselves, covered sides and top with snow and ice, glistening in the sun, and seemed like a gigantic fairy ice palace. This appearance was still further heightened by some bare rocks at the base, giving the appearance of a large arched doorway. At the mouth of the Pass for a short time the tide rips made a rough sea, causing the vessel to roll badly.

Turning northward into the straits, we passed Egg Island, so called from the abundance of the eggs of wild fowl found there. In the distance was the village of Biorka, noted as the cleanest village on the Aleutian Islands. At 3.15 p. m. we were passing the south end of Unalga Island. Off in the distance to the southwest was the little village of Biorka. At 3.30 we passed Point Erskine and at 4 we were abeam of Kaletcha; soon after the celebrated Priests Rock was passed. We entered Unalaska Bay, and at 5.15 p. m. made fast to the wharf at Udakhta (Dutch Harbor).

Three busy days were passed in visiting the Jessie Lee Memorial Home of the Methodist Woman's Home Missionary Society at Unalaska, also the public school, and auditing the accounts of Mr. James C. Blaine, who had been in charge of the removal of the old and the reconstruction of the new school building.

At 4.10 p. m. June 8 the ship cast off from the wharf, and, after taking on board the steam launch, passed out of the harbor and headed westward for Asia.

At 2.30, the 9th, we passed the celebrated Bogoslov Volcano, 13 miles distant. Our route lay to the north, parallel with the Aleutian Islands. These, however, were so far distant that only occasionally the peaks of the highest mountains were visible.

During the morning of the 13th we crossed the one hundred and eightieth degree of west longitude, and owing to the change from west to east longitude dropped a day in the calendar, making six instead of seven in our present week. At 10.14 a. m. on the 14th Attu Island was in sight, and at noon we were distant from it about 23 miles. At 4 p. m. Cape Wrangell became visible. A high mountain range seemed to traverse the island from south to northwest, covered with snow down to the water. The coast seemed to be precipitous and desolate.

The morning of June 17 dawned with a sky overcast and cloudy. According to our reckoning we should have been in sight of the moun-

tains of Asia. We had already passed south of Cape Tahipunski (although the fog prevented us from seeing it) and were rapidly approaching the mouth of Avatcha Harbor. An anxious lookout was kept for the land. At 12.30, noon, the officer of the deck thought he saw a bold headland through the fog. A half hour later there was no doubt about it; rocky cliffs loomed up all around us; the great mountain range that incloses the bay like a gigantic amphitheater was partially concealed by a curtain of fog. Afterwards, when, on the 23d, we steamed out of the bay under a cloudless sky, great precipices of rock appeared, walling in the waters of the sea, and great columns of rock rising out of the sea stood like eternal sentinels guarding the coast; range upon range of snow-covered mountains encircled Avatcha Bay, crowned with the white volcanic cones of Wilinchiniski (7,257 feet high), Kozelska (5,333 feet), Avatcha (9,081 feet), and Korianski (11,406 feet); we stood as if entranced by the scene. Some day the wonderful scenery of the Kamchatkan coast will attract thousands of tourists. Soon the light-house on Dalni Point, 449 feet above the sea, was made out; the light is used from April to October. The keeper's residence is a long white building with its broadside to the sea; a tall white column some distance in front of the residence shelters the light. The two buildings are so placed that from the sea they represent a great white cross. Later the "Brothers"—three great sentinel rocks inside the heads—came into view; their tops were alive with sea-gulls and sea parrots nesting and laying their eggs. Sweeping up the bay and rounding Pinnacle Rock, the small village of Petropavlovsky with its red and green and brown roofs was seen nestling at the foot of the encircling mountains that stood guard around it. Isnenai Bay and Point, Rakovya Point and Bay, were successively passed, and rounding to at 4.10 p. m., we came to anchor off the village cemetery. The ship could have entered the inner harbor and anchored within a stone's throw of the village, but did not.

We were now in Siberia, the battle ground of the conquering Cossack and free-booting Promyshlenki in their century's march across Asia. In its northern and northwestern sections it is a dreary waste of low rolling and frozen tundra; in its southern and central sections, a region of rugged snow-covered and storm-swept mountains, the land of the fierce howling poorga, of wild beasts and scattered tribes of brave, hardy, and half-civilized people.

Directly in front of our anchorage seven mountain brooks were visible, tumbling down the mountain side and running through the village, furnishing in summer, at least, an abundant supply of pure water to the inhabitants. Shortly after, Mr. A. Jacovleff, bookkeeper of the Russian Seal Company, came on board. He is a Russian, naturalized as an American citizen, and is now engaged in business in Siberia. He, however, looks forward to making his home in California,

where he has spent a number of years. He speaks English and Russian fluently, and proved serviceable as an interpreter during our stay in port. Before leaving the ship we were invited to call upon him whenever we had need of his services.

After dinner I accompanied Lieutenant Jarvis ashore to call upon the ispravnik (governor), who represents the authority of the Russian Government over the lower part of the peninsula, and is magistrate, governor, and chief of police for this whole section.

Upon reaching the governor's house we found that he had gone out. Leaving our cards, we called upon the lieutenant-governor. He, also, was out. We then went to the Russian Sealskin Company's store, and afterwards returned to the ship.

June 19, Sunday, after breakfast, we went ashore to attend the Russo-Greek Church, morning service being at 9 o'clock. There were about 100 present. The singing and chanting were good. Father P. Donskoi, the senior priest, although but 65 years of age, had the appearance of being 75 or 80. For many years he made 3,000 miles a year with dog teams, traveling about his extensive diocese. The hardships of such travel in this semiarctic region have broken him down. During the service the communion was administered to some babes in arms. There were no seats in the church, and all remained standing during a service that lasted two hours. After service we returned to the ship, and soon after Governor Oshurkoff came, with Mr. Jacovleff as interpreter, to call upon us. Mr. P. Oshurkoff is a large, well-formed man, with a face that indicates force of character. They were accompanied by Mr. G. Chupiatoff, agent of the Russian Sealskin Company.

June 19, after breakfast, the captain and myself went ashore sight-seeing, also to secure what information we could with reference to procuring reindeer. Interviews were had with the governor, employees of the fur company, and private citizens, but the man who could give us the fullest and most reliable information was Capt. Philip H. Powers, general manager of the fur company. Captain Powers is an American, from New London, Conn., who came out here thirty-five years ago as a whaler and has made his home in this section ever since. A few years ago he went into the service of the fur company, and step by step has become their general manager. He now spends his winters in Japan, but was expected to arrive at this port in a few days.

The principal objects of interest in the place are the memorials of early exploration. One of these is a cenotaph, sent out from Russia and erected to the memory of Bering, who fitted out his expedition and sailed from this bay to discover Alaska and explore Bering Sea. His remains are buried on Bering Island, one of the Commander group. His cenotaph is in the yard of the Russian Church.



LAPLANDER SCHOOL, EATON REINDEER STATION.

F. H. Gambell, M. D., teacher.



SWEDISH EVANGELICAL UNION MISSION SCHOOL, UNALAKLIK, ALASKA.

Near by is a monument to Capt. Charles Clerke, who, upon the death of Captain Cook, February 14, 1779, at the Sandwich Islands, succeeded to the command of the expedition. The exposures and hardships of the expedition in search of the straits between Asia and America were so great that his health gave way, and on the 22d of August he died at sea off the coast of Kamchatka. He was buried at Petropavlovsky. On a ridge separating the inner from the outer harbor is a monument in memory of the French arctic explorer, La Perouse, who visited this place in the summer of 1787. He sailed from this harbor over a hundred years ago, called at Botany Bay, and disappeared with crew and ship. His monument consists of a large rough boulder set upon a pedestal. Into this boulder has been deeply carved the name, "La Perouse, 1787." A real anchor and anchor chain have been placed across the face of the stone, and the anchor chain encircles the base of the pedestal.

The remaining objects of interest are the remains of the earthworks and batteries which were destroyed by the allied fleets of England and France in 1854 and 1855. In 1854 the fortifications were shelled and silenced by the allied fleet. Marines and sailors were then landed from the ships and an attempt was made to capture the place. As the attacking party was advancing through the woods their officers were nearly all killed by sharpshooters, and the troops, thrown into confusion, were slaughtered, and a number of them driven over a precipice and dashed to pieces. The English and French lost 170 in killed and wounded. Hoisting anchor, the fleets sailed away. Returning, however, in 1855, they found the village abandoned by order of the Czar. They then destroyed the fortifications and burned the Government buildings. The fortifications have never been rebuilt. A few troops are kept there as a local police force. On a sand spit in the harbor the Russian Government has erected a monument in honor of the victory of 1854. This obelisk, 25 feet high, is built of stone, painted black, and surmounted with a gilt star and cross. On the eastern side is this inscription in Russian:

In memory of the fallen
at the
Repulse of the attack of the Anglo-French fleet,
20th and 24th August, 1854.

On the reverse side:

Erected in 1881.

In the outskirts of the village there is a well-kept plat of ground in which three crosses (one English, one French, and one Russian) mark the spot where the men of the three nations were buried. Upon the anniversary of the battle religious services are held at the graves. The grounds are kept in better order than any of the yards of the citizens.

The spring has just opened, the buds of the birch and cottonwood are swelling, and in sheltered places the leaves are partly out. To-day I saw specimens of the famous Yakoot pony, a hardy animal that will find his own food, even in a semiarctic Siberian winter. On this peninsula are said to be large numbers of wild horses that have started from strayed domestic stock. They would be a good breed to introduce into Alaska. The Siberian cattle are an undersized breed, but very hardy.

June 20: Last night about 11 o'clock the Japanese steamer *Setsuyo Maru*, in the employ of the Russian Fur Company, arrived from the northern coast, where it had been locating Japanese and Korean fishermen for the season. The output of the fisheries finds a market in Japan. As the steamer sails from here for Japan an opportunity is afforded for sending out a mail.

After breakfast I went aboard the *Setsuyo Maru* with Captain Jarvis and called on Captain Powers, jr., master. With the exception of the captain all the crew and officers are Japanese and Koreans.

June 21: A rainy day. During the morning I called on Father Donskoi, the old Russian priest. His diocese at one time covered all Kamchatka Peninsula and north to the Anadyr River. Since 1888 he has been an invalid. He still, however, has charge of the services of the church. His son was a few years ago Russian priest at Sitka, Alaska.

At 11 a. m. H. I. M. S. *Yakut*, of the Russian navy, arrived from the Commander Islands and dropped anchor. Captain Jarvis made an official call.

June 22: The forenoon was cloudy; the afternoon clear, bringing out the snow-covered volcanoes and mountain range that surrounds Avatcha Bay as an amphitheater in clear relief around the horizon. It was the first good view of the whole horizon that we have had. The scene was one of marvelous beauty and grandeur. The ward-room officers invited the captain and officers of the *Yakut* to dinner at 5.30, after which the officers of the *Bear* returned with their guests to the *Yakut* to spend the evening.

At 7.15 p. m. the steamer *Kotik*, of the Russian Seal Skin Company, from Japan, for which we had been waiting, passed in and dropped anchor. Captain Jarvis called on Captain Powers, manager of the fur company, who came on the *Kotik* and arranged for a business interview immediately after breakfast to-morrow.

June 23: Captain Jarvis had breakfast at 7.30, and soon after 8 a. m. we were on board the *Kotik* and had a satisfactory interview with Mr. Philip H. Powers with reference to the purchase of reindeer in large numbers. He had no doubt they could be purchased in any number we wished, driven over to a good bay on the Bering Sea side of Kamchatka, and shipped to Alaska. It was arranged that on his

present trip he should ascertain the cost, etc., and write Mr. Blum, agent of the company at San Francisco.

After finishing our business with Mr. Powers, we went ashore for a final settlement of bills and a farewell call on the *ispravnik*. The governor gave Captain Jarvis a letter to the *starosta* (local governor) at Karaginsk, instructing him to give us all possible aid in procuring reindeer on Karaginski Island. The *starosta* is the local magistrate and highest Russian officer in the small settlements. At 11 a. m., by invitation, Captain Jarvis and myself took breakfast with Commander Novakovsky, R. I. N., of the Russian cruiser. His quarters are comfortable; he has an office and dining room, a large bedroom with an iron bedstead, lounge, and a large bath and toilet room. The breakfast passed off pleasantly.

Returning to the *Bear* we had a call from the Government physician, who has charge of a large region of country. He is employing his spare time in writing a history of Kamchatka and its people. I returned ashore with him for a couple of charts he kindly offered the captain; also bade adieu to Mr. and Mrs. A. Jacovleff. During the forenoon the *Bear* steamed into the bay, taking various courses to ascertain the compass deviation. At 3.45 p. m. the anchor was again hoisted, and at 6.30 p. m. we stood down the bay and put to sea. The sky was clear, and the mountains and volcanoes stood out in bold relief against the sky.

June 24: Last night there was a total eclipse of the moon. At 6.30 a. m. we passed Cape Shipunski. This cape is a rocky cliff 200 feet high, and extends inland along a succession of mountain peaks to Jurnanova Volcano, which is a rocky cone 10,608 feet high, and can be seen 120 miles at sea. Avatcha and Korianski volcanoes are also visible. During the afternoon Kronotski, 10,608 feet high, was prominent. This region is a famous resort for mountain sheep.

June 25: At 4 a. m. Cape Kronotski was abeam, 12 miles distant. At 11 a. m. sighted Cape Kamchatka. During the day we passed to the westward of the Commander Islands. These islands belong to Russia and are the resort of the fur seal. They are 79 miles distant from Kamchatka and 180 miles from the island of Attu, the nearest of the American possessions. They form a connecting link between the volcanoes of the Aleutian Islands and those of Kamchatka. Bering, the largest of the group, is 50 miles long and 16 to 17 miles wide at the north end, which is the broadest point. A chain of mountains, 2,210 feet high, extends the length of the island. Bering, the discoverer of the group, died and was buried on the east side of the island, about three-quarters of a mile west-northwest of Cape Khitroff. Copper Island, the companion island to Bering in the group, is 30 miles long and 5 miles broad in the widest part. At the time of Bering's discovery in 1741 there were no inhabitants on the islands. Aleuts were

placed upon the islands in 1826 by the Russian-American Fur Company for the purpose of procuring seal skins. Fifteen reindeer were introduced in 1882 and have multiplied until there are now from 600 to 1,000, the increase furnishing the inhabitants with fresh meat. The yellow raspberry and whortleberry are found in great abundance. Foxes abound, and, in their season, ducks and geese. The present population of the two islands is about 600. The killing of the fur seal is done under Government supervision and the skins turned over to the agent of the Russian Sealskin Company of St. Petersburg.

June 26: At 2 a. m. Cape Kamchatka was abeam. This cape is a bold headland 1,500 feet high, and at its sea base terminates in a pile of rocks 40 feet high which has the appearance of a castle with turrets. We are now opposite the mouth of the Kamchatka River, the largest stream on the peninsula. On the south side of the river and visible many miles at sea is a remarkable group of volcanoes—Kluchefskaya, 16,988 feet; Uskovska, 12,508; Kojerevskaya, 15,400; Tolbatchinska, 11,700; Mount Gordon and Mount Herbert Stewart, about 8,000 each. Kluchefskaya is more or less active all the time, throwing out ashes two or three times a year, sometimes covering the earth for a hundred miles around, as in 1879, when ashes fell 3 inches deep. From the year 1727 to 1731 it was in constant eruption. Beginning with September 25, 1737, it burned with such fierceness for one week that the rocks appeared red hot. In 1762 and 1767 other outbursts are recorded, and in 1829 Adolph Erman, a German scientist, found the burning lava pouring out in a continuous stream. In 1854 and again in 1885 it was in active eruption—the pillar of flame in calm weather being visible for 250 miles. On a quiet day it is reported that smoke and steam would ascend forming a perpendicular column thousands of feet high.

An agricultural colony of Russians from the valley of the Lena River were settled at Melcova on the Kamchatka River as early as 1743. Among the seven church bells in the little belfry is one with the date of 1761.

At noon, Cape Oserni, 9 miles distant, was abeam, and the southern end of Karaginski Island was sighted. The coast line between Cape Kamchatka and Oserni was found to be from 4 to 7 miles north of charted position. At 6.30 p. m. we were abreast of Cape Nagikinski, which is the boundary line between the Koriaks of the north and the Kamchadales of the south. We came to anchor abreast of Vivinski village, on the west side of Baroness Korfg Bay. No natives putting off shore for the ship, at 10.10 our anchor was hoisted and we were again under way. At 3.25 p. m. we anchored behind a sand spit which forms General Skobeleff Harbor, in the northwest corner of the gulf. At 7 p. m. Lieutenant Bertholf, Dr. Call, and myself went ashore to communicate with the natives. We visited the village at the mouth of Kultuznaya River. On our way over Dr. Call shot several eider ducks.

Learning that a prominent deer man with 2,000 reindeer was a day's journey inland, we hired a runner to go and notify him that a ship was in the harbor and that the captain wished to buy reindeer. The villagers were drying fish, long racks of which were to be seen. At 10 p. m. we returned to the ship. At 11:35 p. m. we came to anchor off the mouth of the Karaga Harbor, it being too dark to attempt to enter. Karaga Bay is 9 miles long and from 4 to 8 miles wide.

June 27: Temperature, 56°. The morning was foggy. Two parties were sent out in small boats to make soundings to find the best way into the harbor. After lunch the steam launch was put into the water and Lieutenant Bertholf, Assistant Engineer Lewton, Dr. Call, and myself, with a rowboat in tow, at 1.45 p. m., started ashore to communicate with the natives and get the sarosta or headman of the village to go with us to Karaginski Island for reindeer. Within a mile of the shore, at the upper end of the harbor, the steam launch got aground and could go no farther. We then transferred ourselves to the rowboat and started for the mouth of the river, the village sought being 2 or 3 miles up the river. As we were passing a small fishing village the natives raised a flag and signaled us to come ashore, which we did, although the water became so shallow that those who had on rubber boots reaching to the hip were compelled to get out and help pull the boat over the shallow places. To our gratification we found the man we were looking for at this village. The village consisted of several earth huts for the people, and eight or ten storehouses raised on poles, beyond the reach of the dogs. These storehouses had conical roofs thatched with wild grass. Dr. Call secured some photographs, and later in the afternoon I secured for the Alaska Society of Natural History, at Sitka, a good specimen of one of these notched logs that serve as a ladder. Having completed our arrangements with the headman and a friend who wished to accompany him to the herd, in half an hour we returned to the beach. The sailor in charge of the launch, misunderstanding the orders given him, had steamed back to the ship. Rowing was hard work; we had a head wind and strong tide against us, and soon decided to go ashore on the sand spit and camp until the steam launch should return in search of us.

A good fire of driftwood was soon burning, water was boiled for tea and coffee, bacon was fried to a crisp, sundry cans were opened, and with good appetites we sat down in the sand to enjoy our lunch. After lunch, those who had guns strolled off after wild ducks. About 9 p. m. we saw through the fog the smoke of the steam launch, and at 10 o'clock we were again aboard the ship, having had an enjoyable afternoon.

June 28: Temperature, 51°. The fog lifting; pleasant day. At 7.10 the anchor was raised and we steamed away for Karaginski Island, reaching there at 11.35 a. m., and anchoring in Lozhnuikh Vyestei Bay.

While we were at Petropavlovsk the trader of the Russian Sealskin Company stationed at Karaga had arrived and informed us that on this island was a herd of 3,000 reindeer. According to his statement, about twelve years ago the ice between the Karaginski Island and main land became so firm that a band of reindeer had been driven across to the island, and these had increased until now there were 3,000. He said that the Koriak owners, being cut off from all markets, would make haste to let us have all we could carry in return for the supplies with which we could furnish them. At Karaga the starosta (Russian official) whom we had brought with us to the island placed the number of reindeer at 2,000 head. That there might be no unnecessary delays, the trade goods were brought on deck, the litters for carrying the hobbled deer and sling for hoisting them on shipboard were made, and the pens cleared out for their reception on deck. Lieutenant Ulke and Dr. Call were sent ashore to procure the headman of the island and bring him aboard. At 4.15 p. m. the boat returned with the leading deer owner. He was furnished with crackers and a cup of hot tea in the pilot house, and the captain proceeded to negotiate for the deer, when, to our extreme disappointment, we found that the people had no reindeer to spare; that while it was true that a year ago they had from 2,000 to 3,000, during last winter an epidemic had broken out among the deer and there were but a few over a hundred left. All our expectations were in a moment dashed to the earth. He was willing to let us have five, but as it would require three days' time to go to the herd and drive them to the sea, we could not afford to wait for so few. The people seemed very poor. The population of the island numbers 27. The island is about 60 miles long and traversed by a snow-covered range of mountains 2,000 feet high. Foxes, bears, and ptarmagin are found upon the island. Reindeer moss abounds everywhere.

June 29: At 5.15 a. m. we got under way for Karaga to return the starostas, Ivan, and his friend. Anchorage was reached at 9.35 a. m. The steam launch, with steam already up, was lowered into the sea and Lieutenants Bertholf and Gamble, Dr. Call, the two Koriaks, four sailors, and myself started with the steam launch and boat in tow for the shore at 9.55. Within 2 miles of the village the water shoaled until the steam launch could go no farther. Dr. Call, Ivan, and I got into the dingy with the understanding that when we reached shore we would send the dingy back for Lieutenants Bertholf and Gamble. When we were about a mile distant from the village the dingy went aground. As Dr. Call had on rubber boots, he and Ivan waded ashore, while the two sailors and I sat two hours in the boat until the tide had turned, and with considerable lifting and pushing the boat was once more got afloat. We then returned to the steam launch. Putting the native ashore on the sand spit, we returned to the ship,

arriving at 3.40 p. m. At 3.55 p. m. we were under way down the bay and out to sea.

June 30: At 9.45 a. m. we came to anchor abreast of Vivinski village, on the west side of Baroness Korfg Bay. No natives putting off shore for the ship, at 10.10 a. m. the anchor was hoisted and we were again under way. At 3.25 p. m. we anchored behind a sand spit which forms General Skobelev Harbor, in the northwest corner of the gulf. At 7 p. m. Lieutenant Bertholf, Dr. Call, and myself went ashore to communicate with the natives. We visited the village at the mouth of Kultuznaya River. On our way Dr. Call shot several eider ducks. Learning that a prominent deer man with 2,000 reindeer was a day's journey inland, we hired a runner to go and notify him that a ship was in the harbor and that the captain wished to buy reindeer. The villagers were drying fish, long racks of which extended along the beach. At 10 p. m. we returned to the ship.

Summary for June: Traveled 2,921.4 miles; under steam and sail 1,722.9 miles; coal used, 164½ tons.

July 1: Skobelev Harbor. Warm, sunny day. At 1.50 a. m. Lieutenant Bertholf, Engineer Spear, Dr. Call, and myself went ashore at the village to hire the natives to gather grass or moss for the reindeer while en route. Had lunch on the beach and returned to the ship at 4.20 p. m. After dinner Dr. Call and Lieutenant Bertholf went ashore to communicate with the natives. They found that the runner sent last night for some cause had only gone part way to the deer man and then returned. Another runner was secured and started off. Lieutenant Ulke went hunting and returned with some ducks.

July 2: Beautiful day. Temperature 63. Spent the day quietly reading. As usual on Sunday, we distributed reading matter among the crew, sailors, firemen, and cooks.

July 3: Two deer men came off this morning and news was received that there was a Russian trader at the village on Sibir Harbor, across the bay. After breakfast Lieutenant Bertholf, Dr. Call, and myself went in the steam launch to fetch the trader. He was found and brought off to the ship as interpreter. Dr. Call could talk Russian with the trader, and he in turn could talk Koriak with the natives. While on shore Dr. Call took a number of photographs. In the village were two large tents covered with reindeer skins and a large sod house used as a store, which was without windows, all the light being received through the open door. The contents of the store were a few boxes of trade goods and large piles of furs—bear, fox, squirrel, wolverine, ermine, also swan and reindeer skins.

Upon returning to the ship it was learned that the runner who started off on Saturday night to notify the deer man while en route had met a bear which had killed his dog and that he was so frightened that he had turned and fled. Immediately two other men were secured

and started off. A conference was held in the pilot house between the captain, myself, and the two deer men. They looked over samples of our barter goods and discussed the matter somewhat with Peter, the trader. It was a new problem to them. They had frequently slaughtered deer and sold them for food, but had never been asked to sell their deer alive to be carried off they knew not where. They finally concluded not to come to any decision until the arrival of the third deer man and they had had an opportunity of coming to an understanding among themselves. In the meantime a number of sacks were sent ashore to be filled with food for the reindeer while en route.

After dinner Peter, the Russian, and the deer men were taken ashore to wait until the arrival of the third man.

July 4: Rained all day. No natives on board. It was the most quiet day we have had on the trip. At noon a salute of 21 guns was fired in honor of the day. In the evening the launch was sent over to the village to learn if the third deer man had arrived. No tidings yet.

July 5: Launch was sent early to get news of the deer man. At 6.30 p. m. the launch was sent again. No tidings. The captain has concluded that he can not wait longer. One of the deer men has agreed to let us have some reindeer without waiting on the others. His herd is a few miles down the bay, and we will go there early to-morrow morning.

July 6: Hove anchor at 6 a. m. and got under way. Crossed over to Sibir, on the northwest side of the bay. Peter, the interpreter, and three Koriak deer men were brought on board. At 7.41 a. m. we were again under way for the reindeer herd, on the east side of the bay, which was reached at 11.35 a. m. The interpreter and deer men were at once landed. At 1 p. m. I went ashore and remained on shore until work was stopped in the evening. Fifty-three reindeer were received on board during the afternoon, after which, up to 10.30 p. m., the Koriaks were being paid off for their deer.

July 7: At 6.30 a. m. Lieutenant Bertholf and the men went ashore for deer. Received on board 47 reindeer. At 11.30 p. m. the deer men came aboard for pay. At 3 p. m. the steam launch and boats were sent ashore for more deer and moss, and at 5.45 returned with deer, the interpreter, and three Koriaks who wished to return with the ship to Sibir. At 6.35 under way. At 10.10 we came to anchor at Sibir. The three deer men that came with us were paid off in barter goods for their reindeer, which took until 1.30 a. m.

July 8: At 7.40 a. m. Lieutenant Bertholf, with the steam launch towing cutters and men, left for the village across the bay to procure moss. At 8 a. m. a boat was sent to fetch Peter, the interpreter.

Peter and Ahlaticah came aboard, and at 9.35 a. m. the ship got under way. Came to anchor at 10.30 a. m. During the day the leading deer man in this region, and the one for whom we waited in vain all the week, arrived and remained on shipboard until we were about to go to sea in the evening. He had a little boy with him about 10 or 12 years old. At 8 p. m. Lieutenant Bertholf and men returned to the ship, having secured 296 bags of moss. At 8.40 hove anchor and returned across the bay. Peter, Ahlaticah, and attendants were sent ashore at 9.20 p. m., and at 10.15 p. m. we started for the sea and Alaska.

July 10: Six fawns died from seasickness and were thrown overboard. In the evening sighted land (Cape Navarin). The cape is formed by a range of mountains extending seaward and ending in a peak 1,690 feet high, from the eastern flank of which the rock descends almost perpendicularly into the sea. It is surrounded by a group of peaks ranging from 1,200 to 2,300 feet high.

July 11: Having crossed the one hundred and eightieth degree of longitude, we changed from eastern to western time, making a day. At 8 p. m. land was sighted on the Asiatic coast, and at 10.30 p. m. St. Lawrence Island was sighted.

July 12: At 7.05 a. m. dropped anchor at Indian Point. A large number of natives came aboard the ship, among them being Koharri, who has a herd of reindeer. He promises Lieutenant Jarvis to let him have some for the Government. Both Koharri and his adult son were under the influence of liquor. At 11.35 a. m. hoisted anchor and steamed over to Gambell, St. Lawrence Island, where we dropped anchor at 5.20 p. m. Lieutenant Bertholf and myself at once went on shore, the lieutenant taking a number of empty sacks with him for moss for the reindeer. After distributing the sacks among the natives we proceeded with Mr. Doty and Abrahamsen, who had met us at the landing, to the mission houses. As Mr. Doty's and Abrahamsen's time had expired, they immediately commenced preparations for departure. The house was fastened up and their baggage sent to the landing. In the meantime word had been sent to Lieutenant Jarvis that some of the natives had secured whisky from the whalers and one had attempted the life of the missionary, in response to which an officer and some sailors were sent ashore to arrest Captain Jack (Sablak), the guilty one, and take him to the ship in irons, which was done.

Mr. Doty reported that from the latter part of April to the early part of June there was an epidemic of influenza, which had affected every person in the community. During the prevalence of the epidemic there were 7 deaths in a population of about 300; 5 of these deaths occurred within forty-eight hours, and 4 of the sufferers had been killed by their relatives and friends at their own request.

One of them, a blind man, had his friends place a rifle so that he could discharge it with his foot, and then shot himself. Another man, after certain heathen ceremonies, was shot by his sister-in-law. A man and woman were strangled by hanging. All these persons were sick and asked to be killed. It is their belief that when sick and about to die, if they, or their friends for them, take their lives they will thereby escape the devil and go direct to God. Therefore this killing is regarded as a favor. After a person is thus killed his relatives and those that assist make great lamentation over the deceased. It is very rarely that a man is strangled at St. Lawrence Island. He is either expected to take his own life with a knife or rifle or have his friends do it for him. In the above cases Mr. Doty had been informed of what was about to take place, but his protests and expostulations were of no avail. The influenza extended also along the Siberian coast. It was reported that at Indian Point 6 adults and 18 or 20 children died and that among the reindeer men inland from that point there had been 60 deaths. Probably many of these were assisted deaths. Cpts. S. F. Cottle and B. T. Tilton, of the whaling fleet, report that on the Diomed Islands a woman was hung and a man stabbed by their friends.

The whaling vessels *Jeanette*, *Grampus*, *Thrasher*, *Bowhead*, *Belvedere*, *Fearless*, *Alexander*, and *Wm. Bayliss* had called at Gambell. The *Belena*, *Bonanza*, and *Narwhal* passed without stopping. The *Albion*, with freight and the cutter *Thetis*, had also called. Charles E. Buckler, captain of the *Wm. Bayliss*, who had been drinking hard, accidentally shot himself and was buried at St. Lawrence Island. Mr. Doty conducted the funeral services. Four whales had been taken by the fleet up to June 20. They also had done a large amount of trading. At Gambell the natives secured one whale by hunting and another was found dead in the ice, and the bone secured. Two whales floated ashore, but the bone had been removed. It was reported that one whale had been captured by the natives at Indian Point, one near St. Lawrence Bay, one at East Cape, and one at Plover Bay. At the latter place five boat loads of natives off whaling were gone five weeks and given up for lost. They had subsisted on raw walrus meat. At 10.35 p. m. we hoisted anchor and steamed for Point Rodney, Alaska, where we expected to land our reindeer for Antisarlook.

July 13: Rained all day; dropped anchor off Point Rodney at 9 p. m. Surf too high for landing.

July 14: Being too rough to land the deer, at 6.30 we hoisted anchor and started for Port Clarence, dropping anchor at the sand spit at 1.15. The following vessels were at anchor: Bark *J. D. Peters* with coal; steamer *Balena*, schooner *J. M. Coleman* (coal and supplies), *Wm. Bayliss*, steamers *Grampus*, *Narwhal*, and *Thrasher*.

Finding Per Larsen Anthi (Lapp) and Tautook (Eskimo) at the spit, Lieutenant Jarvis employed them, with two Eskimo assistants, to drive the herd of deer across to Charlie's, about 40 miles distant. At 4.25 p. m. the anchor was hoisted and we steamed up the bay to Cape Riley, where the reindeer were landed. After dinner I went ashore and remained until all the deer (83) were landed. Returned with Lieutenant Bertholf and the sailors to the ship at 1.15 a. m.

July 15: At 8.10 the anchor was hoisted and we steamed across the bay to the Teller Reindeer Station, where we anchored at 9.45. Lieutenant Bertholf was sent off with the steam launch to visit schooner *Mary Bitwell*, that had gone ashore near Grantley Harbor. In the meantime supplies for Tautook that had been brought up from San Francisco were "broken out" and preparations made to land them at Teller Station. The surf was so rough that this was given up and at 4 p. m. anchor was hoisted and we returned to the sand spit, where we anchored at 5.30 p. m. Several whaling captains came on board to call upon Captain Jarvis. Mr. Charles E. Chard applying for permission to occupy one of the buildings at Teller Station, he was permitted to use the log schoolhouse until June 30, 1900, upon condition that he take charge and care of all the other buildings belonging to the Government at the station. Four boat loads of natives who wished to return home to Cape Prince of Wales were taken on board and their umiaks hung to the davits.

July 16: At 2.50 a. m. we got under way for Cape Prince of Wales, where we anchored at 8.30 a. m. The water was so rough and the surf so bad that only one of the native boats made the attempt to land. They had great difficulty in getting ashore. As it was impossible to land the supplies or communicate with shore, and fearing to miss the revenue cutter *Thetis* that was at St. Lawrence Island, the captain concluded to run over to St. Lawrence Bay, Siberia. At 10.50 a. m. the anchor was hoisted and we got under way. At 11.55 we met the *Thetis* coming to Cape Prince of Wales with 14 reindeer. We returned and anchored at 2.10 p. m. off the village. After anchoring, Lieutenant Hamlet brought off a small mail for the *Bear*. Learning that Dr. Call was very sick, he returned to the *Thetis* and brought off Dr. Hawley. The waves were running so high that the *Bear* had to get under way and take Lieutenant Hamlet and his boat to the windward of the *Thetis* to enable him to get back to his vessel. As the motion of the ship was injurious to Dr. Call, at 7 p. m. we started to return to Port Clarence.

July 17: The sea was so rough and the current so strong that we were twelve hours steaming 60 miles, reaching anchorage at Port Clarence at 7.13 a. m. The day was rainy and stormy. At 7.40 p. m. the revenue cutter *Thetis* arrived from Cape Prince of Wales.

July 18: At anchor off Point Spencer. Immediately after breakfast went over to the cutter *Thetis* to confer concerning reindeer with Captain Buhner. There were 14 reindeer on the *Thetis* and the fodder was exhausted. As there was a herd of reindeer on shore (which he did not know) for the purpose of receiving small lots of deer, Lieutenant Hamlet and myself went ashore to hunt up Dunnak and Sekeogluk (reindeer men) and make arrangements for landing. As the *Thetis* was a long distance from the landing place, anchor was hoisted and the vessel steamed abreast of the point of landing. Immediately after 12 o'clock the 14 deer were loaded into two boats and Lieutenant Hamlet and I again went ashore. The landing was made without difficulty and the deer driven off to the herd by Dunnak and Sekeogluk.

After dinner I went to the *Thetis*, and in company with Lieutenant Hamlet went in search of a young Siberian from Whalen, known as Chio, Captain Buhner needing him as interpreter in the purchase of reindeer. It was from two to three hours before we found and secured him as interpreter.

During the afternoon I took ashore and left in Dunnak's tent for Per Larsen Anthi the following supplies: One sack of flour, 2 pounds ground coffee, 5 pounds of sugar, 6 cans roast beef, 3 cans condensed milk, 5 pounds butter, and 25 pounds of salted pork.

July 19: At anchor at Point Spencer. After breakfast received on board, from the whaling bark *Mermaid*, Frank Temple for transportation to St. Michael, he having assaulted with a knife and cut Crutchfield of that vessel, July 6. He was placed in the fore hold in double irons. Crutchfield also was taken on board and placed in charge of the surgeon.

At 11.10 a. m. we got under way for Teller Reindeer Station, where we anchored at 11.30 a. m. A native boat was loaded with supplies belonging to Tautook, which had been paid him for services connected with the relief expedition to Point Barrow in the winter of 1897-98. Went ashore with the boat and inspected the Government buildings at Teller Reindeer Station. They are already commencing to run down. At 1.15 p. m. we got under way for Point Spencer, stopping at 1.25 to board the schooner *Jessie*, of Los Angeles. At 3.15 p. m. anchored at Port Clarence. Lieutenant Bertholf and the master at arms left the ship to arrest As-sheer'-ruk, who murdered Frank Boyd, a miner, on the Noatak River, in the fall of 1897. At 4 p. m. they returned with the man in double irons. He was also imprisoned in the fore hold. At 6.58 we got under way for Cape Prince of Wales with four boat loads of Eskimos. A native from the Diomed Islands, Noo-var-loo, while drunk shot Arkiark, a Diomed boy, but he escaped before he could be arrested.

July 20: Came to anchor at Cape Prince of Wales at 12.35 a. m. Got up and dressed so as to be able to see Mr. Lopp, the missionary, at that point. The sea proving too rough to land supplies, we lay at

anchor all day. Mr. Lopp came off and spent the day and night on the ship. Stormy and unpleasant day.

July 21: At anchor off Cape Prince of Wales. During the night the sea calmed down, so that very early in the morning we commenced the landing of the stores which had been brought to pay Mr. Lopp's herders for their trip to Point Barrow in 1897-98, in the relief expedition. The supplies having been landed, Mr. Lopp bade us good-bye, and at 8.55 a. m. the anchor was hoisted and we steamed away for Cape Blossom, Kotzebue Sound.

July 22: This morning, about 8 o'clock, we met the schooner *General McPherson*, loaded with miners en route from Kotzebue Sound to Cape Nome. As the schooner had been taken off last fall contrary to the orders of the owners, and a warrant being out for her seizure, Lieutenant Jarvis arrested the captain and placed Lieutenant Ballinger on board with instructions to convey the vessel to St. Michael and deliver it up to the court. It proved to be a warm, pleasant day. At 4.20 p. m. the ship anchored off Cape Blossom and very soon after, in company with Lieutenant Bertholf and Dr. Hawley, I was on my way to the settlement, some 12 miles distant, which we reached about 8 o'clock. As we came abreast of the Quaker Mission, where from 200 to 300 miners were assembled, they gave three hearty cheers at our arrival, knowing that the steam launch had on board their first mail this season. We soon learned that the Kotzebue mining district had not met expectations. There were from 350 to 400 miners in the camp, three-fourths of whom had had the scurvy and many of them were destitute. There had been a large number of deaths from scurvy, drowning, and freezing. They were sick, without means, and disheartened. Lieutenant Bertholf and the surgeon immediately proceeded to investigate the condition of things while I spent the time at the mission. Toward morning the lieutenant came in and announced that he would take off to the *Bear* 33 of the worst cases of scurvy. At 5 a. m., having been up all night, a start was made to return to the ship, but the tide being out the steam launch was soon aground and the party returned to the village. The lieutenant then hired a small stern-wheel steamer to take the miners off to the *Bear*. We finally left the shore about 10.15 a. m., and reached the ship soon after noon. The captain, hearing of the sad condition on shore, sent the steamer back for others.

July 23: At 1.30 p. m. the steamer *Arctic Bird* arrived, bringing 33 scurvy-stricken men to the *Bear*. The men were taken on board, and the steamer sent back to the camp for another load. It was a beautiful day—temperature 55—mosquitoes very bad on shore. I regretted that I could not have remained on shore to attend the Eskimo service of the Quakers.

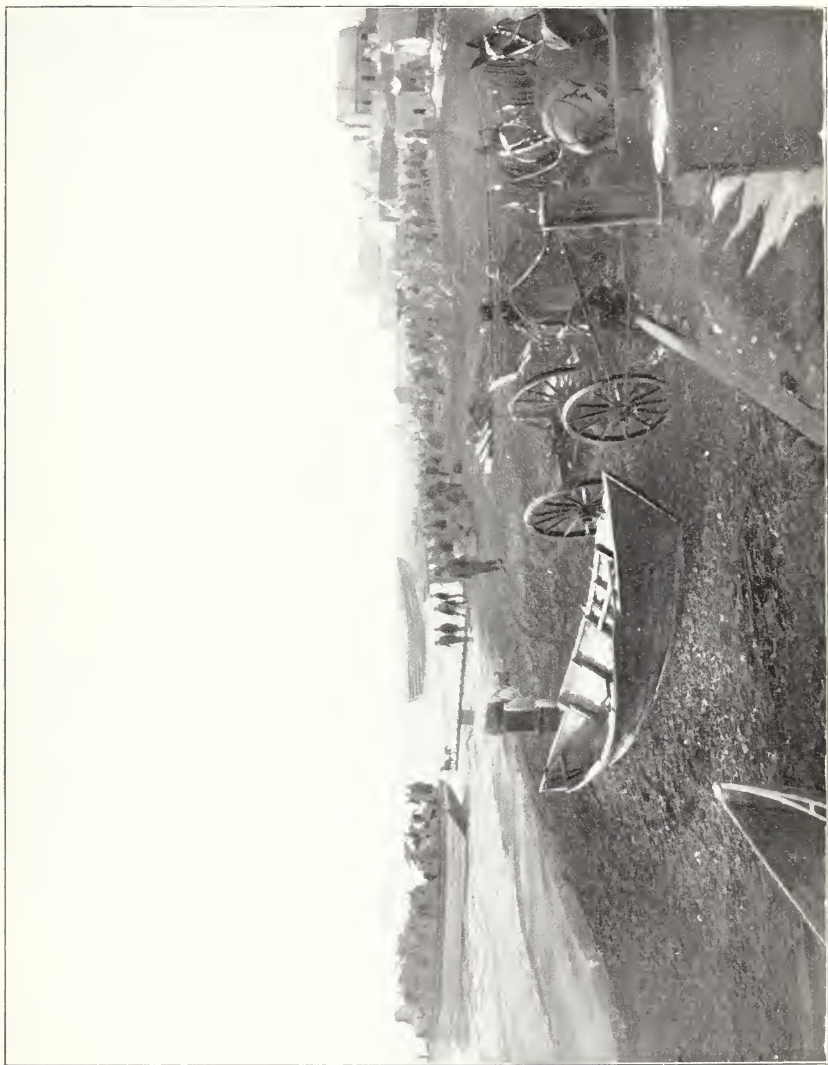
July 24: At 3.45 a. m. the steamer *Arctic Bird* arrived with 48 men, 2 women, and 1 babe, all destitute. At 5.20 a. m. we were under way

for St. Michael. A fine day. During the day we passed a number of small boats, with miners, en route from Kotzebue Sound to Anvil City.

July 25: About 6 a. m. passed Cape Prince of Wales. The *Bear* swung around by Cape Spencer to see if the bark *Alaska* was in Port Clarence Harbor. Not seeing it (afterwards it was learned that it was there waiting for the *Bear*), the *Bear* continued on to Synrock, Antisarlook's place, where we anchored at 8.30 p. m., in the lee of Sledge Island. The supplies brought up from San Francisco for Antisarlook, due him for his trip to Point Barrow in the overland relief expedition of 1897-98, were landed. Upon the return of the boats, Antisarlook, wife, and child, came aboard to go to St. Michael. While on shore the officer learned that Asheuk, the Diomedé murderer that shot and killed Naribuck, a boy, at Point Spencer on the 15th and then escaped, had left there only a few hours before.

July 26: At 12.30 a. m. the *Bear* was under way. At 6.40 a. m., seeing a native camp on the beach, Lieutenant Bertholf went ashore and found and arrested Asheuk. At 7.40 a. m. we got under way, taking in tow the seized schooner *General McPherson*, which we had overtaken. At 10.50 a. m. we anchored abreast of Anvil City, the new village which has sprung up in connection with the Cape Nome placer mines. At 11.30 went ashore with Lieutenant Bertholf. Our boat got aground in trying to cross the bar at the mouth of Snake River, and it was with difficulty that we got ashore. Met Mr. Redmyer, assistant superintendent of reindeer, who had come down from Circle City; also Dr. Kittlesen and Messrs. Andersen and Elliott of the Swedish Mission at Golovin Bay. Learning that Mr. Kjellmann was at the mines, some 5 miles away, I sent a Lapp with a note for him to come at once to go with me to the reindeer station. Mr. D. H. Smith, United States deputy marshal and the principal owner of the schooner *General McPherson*, in company with an officer of the *Bear*, went aboard the schooner and arrested Capt. J. B. Neilson, who had stolen the schooner in the fall of 1898. Jeremias Abrahamsen, whom I had brought from St. Lawrence Island, was given his discharge from the Government service and allowed to go ashore. Messrs. Kjellmann and Redmyer came off for passage to St. Michael. At 7.40 p. m. we got under way for St. Michael. Nome (Anvil City) is a conglomeration of tents, with half a dozen frame houses or shanties, and two or three iron warehouses in process of erection by the transportation and trading companies. The ocean front is staked out with claims for from 10 to 20 miles. We saw men panning out gold on the beach in front of the most densely populated part of the place. Some fine teams of horses were being used in hauling.

July 27: A beautiful day. At 10.15 a. m. anchored at St. Michael. The place had greatly improved since I left it last September. The cutters *Corwin*, *Rush*, and *Nunivak* were in the harbor. Went ashore with the first boat, and at once proceeded to military headquarters to



BEACH AT CAPE NOME, 1899.



arrange with Capt. E. S. Walker, Eighth Infantry, U. S. A., for the payment of the Lapps by the War Department.

July 28: A beautiful day. All day on shore attending to business. During the forenoon, Mr. Gray, as agent of the North American Transportation and Trading Company, sublet to Mr. William A. Kjellmann the mail route between St. Michael, Golovin Bay, and Kotzebue Sound. Mr. Hendricks and I went on Mr. Kjellmann's bond. Returned to the ship at midnight. Mr. William F. Doty left the *Bear* and took up quarters at Hotel Healy.

July 29: Fine weather continues. All day on shore attending to business. About 11 p. m. Captain Walker took me off to the ship on the army steam launch. The trade of St. Michael has greatly changed since a year ago. Then there was a rush of miners up the Yukon River; now very few are seeking passage up that river—but thousands are coming down; some to leave the country in disgust and others to try the Cape Nome mining district. The up-river business is now mostly freight. Owing to the decrease of the passenger traffic, many of the small river steamers are laid up. The harbor is full of them.

July 30: After lunch I went ashore to attend divine service, held in the dining room of the Hotel Healy, and conducted by Rev. Loyal L. Wirt, territorial superintendent of Congregational missionary work in Alaska. About one hundred persons were present at the service, which was of great interest. The theme of the discourse was, "Christ the wonderful." After service I returned to the ship.

July 31: During the night there was a change of weather. A storm commenced, with a low barometer, which increased during the forenoon to a gale. During the night, the Yukon River steamer *Jessie*, of the Alaska Commercial Company, went ashore with three barges, loaded with military supplies for Colonel Ray. At 5.30 a. m. the *Bear* commenced dragging its anchor and was thumping on the bottom; in half an hour we were under way, and at 6.45 a. m. anchored in deeper water. The gale increasing, at 10 a. m. we were again under way, seeking shelter behind Egg Island, where we dropped anchor at noon. In the harbor at St. Michael a large number of vessels dragged their anchors, and a number of the smaller boats went ashore. Toward evening, the force of the gale being spent, the *Bear* hove anchor at 8.40 and returned to St. Michael at 10.15 p. m. The depth of water in the harbor was lowered 5 feet by the storm.

August 1: Went ashore on the first trip of the steam launch and was very busy with Captain Walker, U. S. A., completing the drawing of checks for payment of Lapps. At 4.30 p. m., with Mr. Kjellmann, returned to the *Bear* on the army steam launch, and at 4.50 we were under way for Unalaklik. A boat was lowered, and Mr. Kjellmann and I were sent ashore with the mail. On shore we fortunately found five Lapps and a boat from the station. They were routed out

of their tent, and preparations were made to proceed at once up the Unalaklik River 8 miles, to the Eaton Reindeer Station. As we left the ship a steady rain commenced which lasted until we reached Eaton. A piece of driftwood was laid across the boat and a tarpaulin stretched across, which formed a shelter from the rain. Under this shelter Mr. Kjellmann and I crawled. Innumerable mosquitoes also sought shelter under our improvised tent. Mr. Kjellmann made an ineffectual attempt to drive them out with tobacco smoke; failing, he resigned himself to his fate and went to sleep. I alternated my time between fighting mosquitoes and sitting out in the rain.

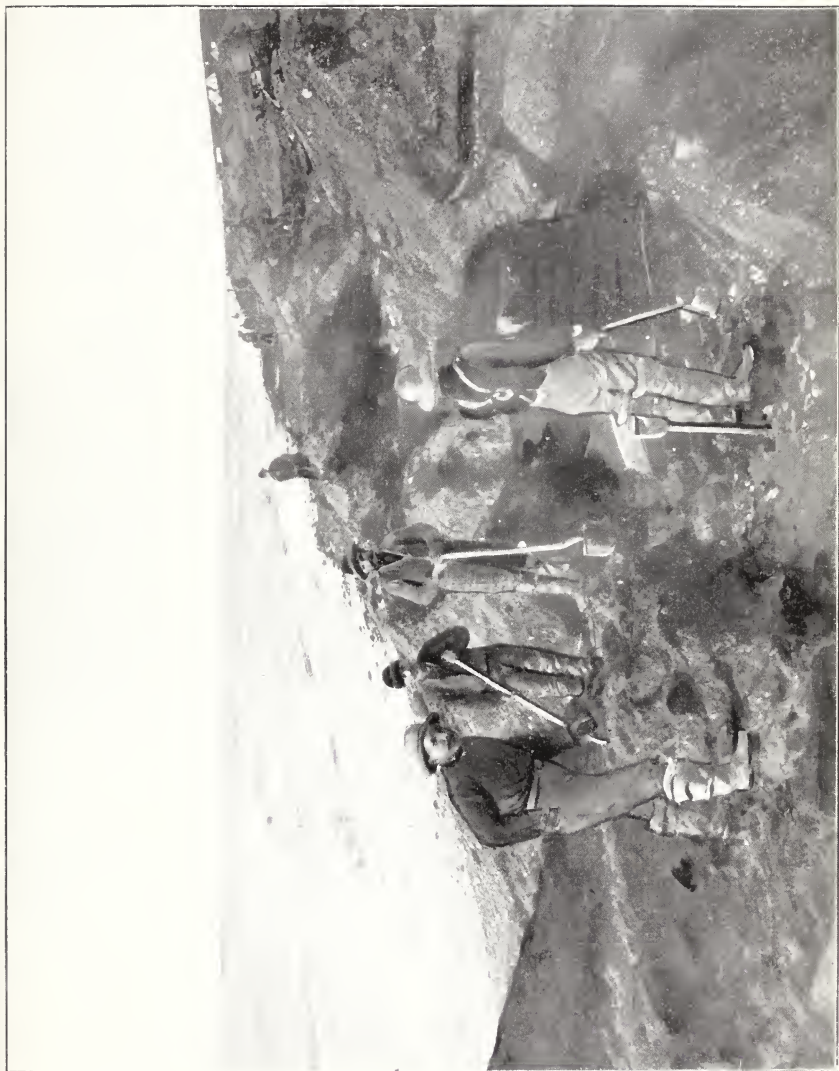
August 2: At 5 a. m. the night trip closed with our arrival at Eaton Station. Dr. F. H. Gambell had given up our coming and had gone down to St. Michael to meet us, and we had passed on the sea. Dr. Lerrigo was awakened, and soon we had a good warm breakfast. After breakfast the Lapps were summoned and the payment of their salaries from July 1, 1898, to January 31, 1899, by the War Department, was commenced. Thus with the signing of vouchers and arrangements for the deposit of their surplus salaries in banks to their credit, the whole forenoon was consumed. After payment closed I had the 12 children of the settlement brought into the schoolroom, heard them recite and sing and made each the present of a picture book. After dinner, supplies were got out for the reindeer herders in the arctic, and at 1 p. m. we were off on our return to the ship. A stop was made at Unalaklik to call on the missionaries of the Swedish Evangelical Union, where we were presented with beautiful bouquets of wild flowers and a box of fine radishes from their gardens.

After our arrival at Eaton, in the morning, the rain ceased and the sun came out. When we started on our return in the afternoon the rain again set in and lasted until our arrival at Unalaklik. While at Eaton Station a fishing party returned with the seine. When they were asked what success they had had, they replied, "Not much, only a hundred salmon." At 5 p. m. Mr. Kjellmann and I reached the ship with supplies for the overland expedition which was to drive a portion of the reindeer back from Point Barrow to Cape Prince of Wales, and also with barter goods for the reindeer trade of the *Thetis*. At 5.45 p. m. we were under way for Nome.

On the 24th of December, 1898, Klemet Nilsen had died at the Eaton Station.

August 3: At 1.55 p. m. we anchored abreast of Nome. The sea was rough and badly breaking on shore. Captain Jarvis and Mr. Kjellmann went ashore and got wet in the breakers. The place was wild with the large returns being received both in the gulches and the black ruby sands on the shore.

August 4: During the morning Mr. John W. Kelly came aboard to be taken to Point Hope, where he will make headquarters for taking



MINING ON THE BEACH, NOME, ALASKA, 1899.



the census next winter between Point Hope and Cape Prince of Wales, including the Kotzebue country. At 10.20 a. m. the ship got under way, and at 1.30 p. m. stopped at Synrock to place Antisarlook (Charley) and his family on board his umniak, which had come out to meet him. As we passed Cape Spencer, a dense black cloud hung over Port Clarence, where the *Thetis* was at anchor waiting for us.

August 5: At 1.20 a. m. we came to anchor off Cape Prince of Wales. Going on deck about 6 a. m., I was surprised to find that Mr. W. T. Lopp was on board. During the forenoon Mr. Lopp, Captain Jarvis, and I had a conference with regard to the reindeer. The bark *Alaska* and river steamer *John Riley* were also at anchor in the roadstead. I wrote two or three letters to send by the *John Riley* to the post-office at Nome. In the afternoon Captain Jarvis and I went ashore with Mr. Lopp. Took a look through the village; returned on shipboard about 5 p. m. Mr. Summers, a mining expert, whom the captain had brought up from St. Michael to prospect some mines that Mr. Lopp and his herders had found, was sent ashore with Mr. Lopp. At 5.45 p. m. we were off for Port Clarence.

August 6: Reached Port Clarence early in the morning (3 o'clock), where the *Thetis* was waiting for us. As it seemed best that the rest of the cruise should be made on the *Thetis*, during the forenoon I transferred from the *Bear* to the *Thetis*. The wind was fresh and the sea rough.

August 7: During the forenoon my trunk and personal effects were brought over from the *Bear* to the *Thetis*; also the reindeer barter goods brought from the Eaton station. Captain Buhner during the morning furnished rations on shore for Per Larsen Anti, who is keeping a herd of reindeer at this place. Upon going ashore found that the herd had been removed to Cape Riley. During the day the *Bear* went over to Cape Riley to water.

August 8: At 4 a. m. received word from the *Bear* that Anti was out of rations. As the *Thetis* was prepared to go to sea, Captain Buhner hove anchor at 4.30 a. m. and steamed down to Cape Riley, where we dropped anchor at 7 a. m. I was at once sent ashore with a boat and crew and left rations for Anti. He himself was away from camp after some straying reindeer. Returning to the ship, we were soon under way for sea. In the evening we passed King Island and saw the cutter *Bear* at anchor.

August 9: About noon passed Indian Point. At 9.55 p. m. we dropped anchor at Port Providence, Plover Bay. A boatload of natives visited the ship. Learned that there was a large herd of reindeer 30 to 35 miles to the westward.

August 10: Left our anchorage at 5.05 a. m. During the morning we stopped to communicate with some natives who rowed out to meet us. They also testified that there was a large herd to the westward.

Reaching the bay where the herd was supposed to be, the ship anchored at 4.20 p. m. Lieutenant Hamlet, Chisthe (interpreter), and I went ashore, where we met the reindeer men. Their herd was five days inland and they declined to drive it down to the coast. Thus again our hopes were blasted. A few miles farther west another herd was reported. In attempting to launch the boat from the shore it swamped in the surf, and I was wet through and through. Had difficulty in getting through the surf. Returning to the ship at 7.05 p. m., we were under way for the next herd, but the fog setting in thick, at 8.25 p. m. we anchored for the night.

August 11: At 8.05 made a start and at 10.55 a. m. anchored off Managen, where a number of deer men's huts or tents were seen on shore. Soon after a boatload of natives came off to the ship and we heard again the same story. They had deer and would like to trade, but their deer were pastured many days distant and they could not drive them down to the coast. Being convinced of the uselessness of further search along the north shore of Anadir Gulf, at 12.55 p. m. we hove anchor and steamed away for St. Lawrence Island. A beautiful day.

August 12: At 7.40 a. m. dropped anchor on the northeast side of the point at Gambell, St. Lawrence Island. The wind shifting, we hove anchor and steamed around the point and anchored on the southwest side. Went ashore to the Mission Station and brought off a lot of reindeer barter goods that were not needed at this point, but were needed at the Eaton station. The wind increasing and being a head wind, we lay at anchor until 7.25 p. m., when we put to sea and steamed away for Teller Reindeer Station.

August 13: Head wind and sea, making about 3 miles an hour; I was seasick all day. Distributed magazines to the crew.

August 14: At 11.15 a. m. dropped anchor abreast of Teller Reindeer Station, Port Clarence. Went ashore with the carpenter and nailed up all the doors but one of the large frame house and left the key with Mr. Chard, who has agreed to look after the buildings in return for the use of the log schoolhouse. Also posted notices on the doors of the several buildings, warning against trespassing. The sailors attempted to procure some moss, but in the immediate vicinity of the station, where it had been closely pastured, there was none large enough to gather.

August 15: At 6 a. m. hove anchor and steamed across the bay to Cape Riley, where we dropped anchor at 7.20 a. m. At once went ashore and commenced preparations to take on board 40 sled deer to be removed to Cape York for Mr. William T. Lopp. On July 14 83 deer had been landed to be driven across to Charley, at Point Rodney, in charge of Per Larsen Anti, Tautook, and two other Eskimos.

By 6 o'clock p. m. 40 deer had been caught and placed on board

ship. One was killed on shore in handling. The deer are large, heavy, and in excellent condition. The two umniaks that had been hired were paid for, and at 7.15 p. m. anchor was hove and we steamed away for Cape York and Cape Prince of Wales. The cloud effects at sunset were remarkably brilliant and beautiful.

August 16: Dropped anchor under the lee of Cape Prince of Wales at 4 a. m. The wind was blowing a gale and a driving cold rain storm in progress. No communication with shore or landing of deer possible to-day.

August 17: At 8.50 a. m. hove anchor and steamed to Mr. Lopp's herding grounds near Cape York, where we dropped anchor at 10.10 a. m. At once went ashore, where I found Mr. Hank Summers, mining expert. Herders were sent to have the herd driven down to the beach. Also Eskimos were sent to gather a few sacks of reindeer moss. The herd arriving about 10 a. m., we at once went off to the ship and commenced landing the deer. I remained on shore until the deer were all landed (8 p. m.). Good weather until midnight.

August 18: At 9.20 hove anchor and steamed to Cape Prince of Wales, where we anchored at 11.25 a. m. Mr. Lopp and some natives came aboard. Reindeer barter goods for the use of the *Bear* were landed. Reindeer matters and other business was finished up with Mr. Lopp, and at 3.50 p. m. we were under way.

August 19: At 5.45 a. m. dropped anchor off Cape Riley, and I went ashore to make arrangements for shipping reindeer. Hired three native skin boats and all the men I could procure. A number of the women and children were employed in gathering moss for the deer. During the day 36 sled deer, 3 bucks, and 10 female deer were taken on board, making 49 in all. Fine day. At 5.30 p. m. finished loading. Took on board Per Larsen Anti, together with Government dogs and sleds for Eaton Reindeer Station.

August 20: At 4.05 a. m. hove anchor and steamed away for Point Rodney. Beautiful forenoon; afternoon rainy. At 5.25 p. m. anchored off Charley's (Antisarlook's) place.

August 21: Last evening Lieutenant Hamlet was sent to the shore, but could not make a landing on account of the surf. Waited all day anxiously for the wind to change and the swell to go down, so that we could land the deer, as we were without food for them. In the evening moved inshore.

August 22: Finding no landing, this morning we hove anchor and started for Golovin Bay. The day proved a beautiful one, with sunshine and a crisp, invigorating north wind, but still there was no landing on the beach. Anchored at 8.40 p. m. in the mouth of Golovin Bay under the lee of the west shore.

August 23: At 4 a. m. went ashore with Lieutenant Hamlet to hire native boats. It was a long pull of several miles. Secured at the

village 4 umniaks. Took breakfast and found some late papers at the Swedish Mission. Returned to the ship about 10 o'clock. After giving the natives some coffee and crackers the work of unloading the deer was commenced. Per Larsen Anti was set ashore in charge of the deer. Word had been sent to the Golovin Bay herd, and Owikkon (native herder) came down to help Anti. By 3.45 p. m. the deer were unloaded, and at 7.05 we were under way for Anvil City.

August 24: At 7.30 a. m. dropped anchor off Nome. Immediately after breakfast went ashore and remained all day. Sent word to Mr. William A. Kjellmann and Mr. D. Johnson Elliott that I wished them to come down from the mines to see me. Met Judge Johnson, of the United States district court of Alaska, and was present at the opening of the first court at Anvil City. Saw some of the citizens with regard to a block of ground for school purposes. Had several conferences with the Lapps in the settlement of their accounts. Governor Brady having returned from the mines, I invited him to go to Unalaklik with us. Hove anchor at 8.55 p. m.

August 25: At 4.10 p. m. dropped anchor off Unalaklik. The steam launch took Governor Brady, Messrs. Kjellmann, Karlsen, and myself ashore. Had some difficulty in getting over the bar at the mouth of the Unalaklik River. Providentially Dr. P. H. J. Lerrigo and a party of Lapps were down the river with the reindeer station boat. At 10 p. m. Mrs. Karlsen kindly gave us a lunch and soon after Mr. Kjellmann and I, with the Lapps, started for the station in a rowboat. Mr. Lerrigo's supplies and baggage were sent off to the ship by the steam launch. Bright moonlight, crisp and cold. Mr. Kjellmann and I laid some blankets in the bottom of the boat and got some sleep on our way to the station.

August 26: The current was so swift in the river that wherever the banks would allow it the Lapps landed and towed the boat. It was nearly 4 o'clock in the morning before we reached the station. Throwing myself on a bed, I slept until 6.30, when we had breakfast, and at 7 a. m. were hard at work with the accounts and other business of the station. At 12.30 noon we started on our return trip to Unalaklik, Dr. Gambell accompanying us. It rained hard all the way. Reached Unalaklik about 4 p. m. and a flag was set as a signal for the launch. Inspected the new Government warehouse on the south side of the river at the mouth. Instead of sending the launch two boats were sent off, which were between two and three hours reaching shore. As the crews were wet, cold, and hungry, Rev. Karlsen and wife gave them coffee and a warm lunch. It was expected that Mrs. Karlsen and Miss Johnson would go out to the ship with us en route to St. Michael. Miss Johnson being an invalid, the Doctor forbade her going out to the ship (8 or 10 miles) in an open boat in a rain storm. Consequently Dr. Lerrigo, Mr. Kjellmann, and I went off to the ship in

the cats, and the Governor remained to come off with the ladies in the launch. Reached the ship at 9 p. m.

August 27: Early in the morning the launch was sent for the Governor and ladies. After receiving them on board the launch started to return to the ship. When in the surf it lost its propeller and had to signal to shore for assistance. Rowboats went at once and towed the launch to shore. In the meantime, the wind rising, the ship hove anchor at 10.05 a. m. and proceeded for shelter to the lee of an island in the bay, where it dropped anchor at 1.15 p. m.

August 28: Remained all day at anchorage.

August 29: The gale having somewhat abated, at 5 a. m. we were under way for Unalaklik, where we dropped anchor at 8.05 a. m. Governor Brady, Mrs. Karlsen, Miss Johnson, and an Eskimo girl (the girl going East for an education) came off in a rowboat, and a ship's boat was sent in to tow off the disabled steam launch. The boat and launch returning at 12.45 noon, the ship was soon under way for St. Michael, where we anchored at 8.05 p. m. Went ashore for mail.

August 30: Major Ray, U. S. A., having placed the army steam launch at my service for the forenoon, we had an early breakfast and went ashore. Left vouchers and reports at Captain Walker's office. Adjusted business matters with the North American Transportation and Trading Company. Let Mr. N. V. Hendricks have some reindeer for carrying the mail. Had a conference with Dr. Romig, superintendent of the Moravian Mission on the Kuskokwim River, and at 11.50 a. m. returned to the ship. At 12 noon we were under way for Nome, Major Ray, U. S. A., accompanying us to that place.

August 31: At 6.20 a. m. dropped anchor at Nome. After an early breakfast, went ashore, accompanied by Lieutenant Buhner. Mr. D. J. Elliott and John Brinteson made application for \$20,000 worth of reindeer for the Swedish Evangelical Union Mission Station at Golovin Bay. At 11.20 a. m. we got under way for Gambell, St. Lawrence Island.

September 1: Reached Gambell at 3 p. m. Landed Dr. Lerrigo and opened the mission house. Steamed away for Dutch Harbor (Udakta) at 6.45 p. m.

September 7: Reached Udakta at 10.30 a. m., having seen no land for six days. Found the United States transport *Athenian* at the dock with 100 soldiers and 450 cavalry horses bound from Seattle to Manila.

September 8: In the harbor were two British men-of-war, revenue cutters *McCulloch*, *Grant*, *Corwin*, and *Thetis*, steamer *Townsend*, and United States transport *Victoria* with soldiers and cavalry horses for Manila. Went to Unalaska and inspected school building. Lunched at the M. E. Mission.

September 9: Went aboard the cutter *McCulloch* and steamed away for Unga.

September 10: Beautiful day. At 2 p. m. reached Unga and went ashore and looked over the schoolhouse and teacher's residence.

September 11: At 7 a. m. a term of court was held by Judge Johnson on the *McCulloch*; about a dozen men were naturalized. At 9 a. m. we steamed away for Kadiak. In the afternoon a southeast storm had developed, and the captain, at 10 p. m., headed out to sea and hove to.

September 12: Hove to and weathered out a gale. No table was set for lunch or dinner; took a little food in our hands. Was seasick and very uncomfortable.

September 13: The severity of the gale having somewhat abated and the wind having hauled around to the southwest, at 10 a. m. the ship was headed to the northeast for Kadiak, with a fair wind and sea. Made good progress.

September 14: Early in the morning sighted Kadiak Island. About 2 p. m. dropped anchor opposite Wood Island. Went ashore at Kadiak. Visited the school; Mrs. Hill, teacher. After dinner called at Wood Island.

September 15: Spent the forenoon and took dinner at the Baptist Mission, Wood Island. Appointed Miss H. I. Denniston teacher at Afognak. Sailed about 3 p. m.

September 17: Reached Yakutat and learned of the earthquakes that had been going on since September 3. The whole population is living in tents upon the hills. The severest shock was on the afternoon of the 11th of September. Called upon and comforted the Swede missionaries. At noon steamed away for Sitka.

September 18: When the steamer reached the neighborhood of Sitka the fog was so dense that the captain did not dare venture in, but stood out to sea for the night.

September 19: The fog lifting a little, the harbor was made and we anchored at Sitka about 2 p. m. Mail steamer *Cottage City* was in. I was the guest of Governor Brady.

September 20: Spoke at the native prayer meeting in the evening.

September 21: Moved from Governor Brady's to the mission. Governor and Mrs. Brady gave a dinner to Captain Coulson, Captain and Mrs. Kilgore, Bishop and Mrs. Rowe, the land commissioner and his wife, and myself.

At 8 p. m. a large reception was given to the officers of the cutters *McCulloch* and *Perry* and the citizens.

September 22: Addressed the teachers in the evening.

September 23: In company with Governor Brady, Senator Shoup, Marshal Shoup, Collector McBride, and Superintendent Kelly, went aboard the cutter *Perry*, Capt. Wm. F. Kilgore commanding, Third Lieut. Eben Barker, Chief Engineer Harry L. Boyd, Second Assist



ELEPHANT HEAD, UNGA, ALASKA.

Photo by Lieut. Howard Emery, R. C. S.



NATIVE RECEPTION DAY ON REVENUE CUTTER BEAR.

(When the *Bear* drops anchor off an Eskimo village the whole population flock aboard.)
Photo by J. M. Justice.



ant Taylor W. Ross. Anchored for the night at Killisnoo. Went ashore.

September 24: Started at daylight for Juneau. Anchored at 5 p. m. After dinner went ashore and addressed the congregation at the First Presbyterian Church on Alaskan schools and missions.

September 25: Mr. Kelly and I visited the public schools at Douglas Island.

September 27: Steamed from Juneau at daylight; reached Wrangell about 10 p. m.; went ashore and called on Miss Green, the teacher; Governor Brady, Mr. Kelly, and I also called on Rev. H. P. Corser, the Presbyterian minister.

September 28: At midnight started south, calling at Ketchikan and Saxman and reaching Metlakahla at 2 p. m. Went ashore and looked over the place. In the evening met the leading men in conference.

September 29: In the forenoon a conference was held in the church. At 3 p. m. the *Perry* started on its return to Sitka, leaving me at Saxman.

September 30: Rev. Edward Marsden took me in his steam launch *Marietta* to Gravina, where I met the teacher, Miss Hamblet. At 12 noon the church bell rang and I had a conference with the leading men.

October 1: A beautiful day. At 2 p. m. steamer *City of Seattle* came along and I went aboard for Seattle.

October 2: Reached Seattle at 2 p. m., forty-eight hours from Alaska. After attending to a few items of business and procuring my mail, took 4.30 p. m. train to Tacoma, where other matters of business were arranged. Took the train at 11.30 p. m. for Portland.

October 4: Transacted business for the Laplanders at First National Bank. Took the 6 p. m. train for San Francisco.

October 6: Reached San Francisco at 9 a. m. Spent the day at S. Foster & Co.'s office looking up accounts, arranging business, etc. Mr. Blum, whom I wished to see on reindeer matters, was out of the city. Took the 6 p. m. train for Salt Lake.

October 8: Spent the Sabbath at Salt Lake.

October 9: Took 7 a. m. train for Chicago. During the night had a heavy snowstorm.

October 11: Reached Chicago about 1 p. m., the train being between four and five hours late. At 5.30 p. m. took the Pennsylvania Limited for Washington. During the night we were detained five hours by a freight wreck.

October 12: Reached Washington at 8.45 p. m., about four hours late, thus closing a journey of 18,859 miles.

Very respectfully, yours,

SHELDON JACKSON,

United States General Agent of Education in Alaska.

THE COMMISSIONER OF EDUCATION.



APPENDIX.



REPORT OF DR. W. T. HARRIS, UNITED STATES COMMISSIONER OF EDUCATION, ON REINDEER.

[From Annual Report, 1899, Pages 1 to lix, and annual statement, pages 14-18.]

The reindeer industry:—Still more important, however, is the reindeer industry, which is slowly gaining a foothold in the northwest and extreme north. The abundance of reindeer food in all parts of Alaska where the moss has not given place to forest timber growths and to grasses makes it extremely desirable to have at all the missionary stations and Government schools large herds of reindeer, so that the native apprentices may learn the methods of herding and training to harness.

Something like 2,000 deer were reported in the fall of 1898 as the survival and increase from about 600 imported from Siberia. The annual increase of the herd is so rapid that if we once possess 5,000 of these animals the annual increase could easily be made to furnish the needed herds for the remaining stations in northwestern Alaska.

On account of the substitution of forest trees and grass for moss in southeastern Alaska, where the temperature is milder, there is no possibility of reindeer raising in that section. But on the highlands of the Upper Yukon, as well as the Aleutian Islands and all other parts of Alaska, except the river-bottom lands (where trees take the place of moss), the reindeer can find plenty of food and will ultimately be of great use to all the inhabitants of that region, both natives and immigrants from the States.

The annual increase of a herd with us has been from 40 to 60 per cent, and a herd of 5,000 ought to furnish 2,000 fawns each spring.

At each mission station there is constantly going on a process of selecting the trustworthy natives—those ambitious to learn the civilization of the white man, those ambitious to hold and increase property. Reindeer intrusted to the ordinary individual savage would disappear within twelve months after the gift. The policy has therefore been adopted of lending small herds to missionary societies, the Government reserving the right, after a term of not less than three years, to call upon the mission station for the same number of deer that composed the herd loaned. These small herds loaned to the missionary stations as a Government aid are in the nature of an outfit of industrial apparatus.

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At the Government reindeer station a number of apprentices have been selected and rewards for intelligent and persevering industry offered. They were to receive two reindeer for the first year's apprenticeship; at the end of the second year five more. By this it was hoped gradually to develop the sense of individual ownership of property.

Siberian purchasing station.—Since 1891 the importation of reindeer from Siberia had been confined to the five or six weeks of midsummer, when Bering Sea and the adjacent shores of Arctic Alaska and Siberia are comparatively free from ice, the average annual importation being 134. In order, if possible, to procure deer in larger numbers, with the permission of the Russian Government and with the approval of the Secretary of the Interior, a purchasing party, consisting of Mr. John W. Kelly and two assistants, was stationed at St. Lawrence Bay, a short distance below the Arctic Circle, on the Siberian coast. During August and September several hundred deer were purchased and herded in the vicinity of the station, where they would be in readiness for shipment to Alaska during the following summer. This success encouraged the hope that a practicable method of obtaining deer in large numbers had been found. It appears, however, from the statements of the purchasing agents, that during the winter jealousies and feuds broke out among the barbarous tribes in the vicinity of the station. In the unsettled state of affairs which ensued further trading for reindeer on the part of the white men was impossible. In July, 1898, feeling that their lives were in danger, Mr. Kelly and his two assistants took refuge on a whaling vessel that chanced to enter the bay, abandoned the station, and returned to San Francisco. When Dr. Sheldon Jackson reached the station, in August, he was able to trace and secure only 166 of the deer that had been bought, which, although a larger number than the average annual importation hitherto, did not equal the number confidently expected. It was not thought advisable to continue the experiment further; the station was closed, all movable property being taken to the Teller station, Port Clarence, Alaska. * * *

The extensive territory of Alaska consists of two regions, the southeast one accessible at all times of the year by weekly mails and ordinary modes of travel, and the other and vaster portion, including northwest Alaska, practically inaccessible for more than one mail a year and one visit by sail or steam vessels. The United States Treasury sends a stout steamship bound for the Arctic in the late spring or early summer. It arrives at Unalaska at the east end of the Aleutian chain of islands and passes through the gateway into the Bering Sea, cautiously watching the ice floes which for many weeks prevent the near approach to any of the ports.

There are missionary stations and small settlements on both sides of the mouth of the Yukon, north and south, and many more in the

interior on the banks of the Yukon, but they can not be reached until the ice moves out of that river late in June or early in July.

The Upper Yukon rising near southeast Alaska opens, perhaps, two or even three months earlier. Its waters swell with melted snows, lift the ice and break it up, piling it in great masses over the still solid ice down the river farther to the north. By the last of May the ice runs out of the upper river as far north as the great bend at Fort Yukon, on the Arctic Circle, where the river turns to the west. The ice at the mouth is the last to give way, and hence the river is not available for bringing freight from the States to the mining regions of the Upper Yukon until July. If there were a waterway through the Stikine River in southeast Alaska, or still better, through the Taku River to the upper waters of the Yukon (Lewes Branch and the Teslin River and Lake) there could be water communications through to the Klondike region for six or seven months of the year, and to the Fort Yukon for five months. But of course nearly all this part of the river is in Canada. The fact is that each nationality is at present in the way of the other's best approach to its possessions.

Inasmuch as the time of open-sea navigation in the Bering Sea has been (until 1897) too short to admit of two trips a year from Seattle, all business there is carried on from information received through agents who returned the previous fall, and brought out with them an account of the situation. In October it is known what needs existed at the ports north and south of Bering Strait and on the Lower Yukon, but nothing can be done until the next summer. Meanwhile the situation may have entirely changed. What is sent to the northwest may be useless when it arrives.

It is obvious that the first necessity is communication at all times of the year. For this purpose railroads and even telegraphs are impossible on account of the enormous distances to be overcome. From Sitka, by sea, it is 1,200 miles westward to Unalaska, the gateway to Bering Sea; thence northward to Bering Strait is 800 miles, in all 2,000 miles. Any practicable route through central Alaska, by the Yukon or otherwise, would measure more than 2,000 miles from southeastern Alaska to St. Michael, the port at the mouth of the Yukon. Even short stretches of railroad are almost impossible in Alaska on account of the enormous expense of building where the ground is frozen the year round, except a shallow layer at the surface in the summer, and where for three-fourths of the year the work must be conducted in the Arctic night. In some places in the Rocky Mountain region the railroads cost \$200,000 a mile to build. In Alaska the expense would amount to a million of dollars a mile through the deep cuts of the river and over the watersheds at the head waters. Telegraphic communication will doubtless come to exist when there are permanent gold mines discovered and the requisite works erected; but for mere placer mining this

will not be undertaken at once. It would seem at first, however, that a trunk line might be warranted along the Upper Yukon, connecting at Skagway, and extended after a year or two to the mouth of the Tanana or the Middle Yukon, and finally to St. Michael. But the protection and repair of a telegraph through many hundreds of miles of roadless country makes it so expensive that all the business done in those regions would not pay for the outlay. Only when there are permanent settlements, one in a hundred miles on an average, all the way from southeast Alaska, through central Alaska, to St. Michael at the mouth of the Yukon, may we expect even a telegraph connecting the extreme northwest with the southeast and the States; for a route from any of the ports on the coast from the Copper River, Prince William Sound, or Cooks Inlet, would have from 500 to 1,000 miles to reach the Middle Yukon at the mouth of the Tanana, and the mountainous character of the country would make a telegraph too expensive for the comparatively small volume of business of the northwest to support. Oxen and horses, even mules, can not make freight lines possible through these distances. Dog teams, much used already, have to freight their sledges with food for long journeys. Carrying 125 pounds freight, and needing $1\frac{1}{2}$ pounds of dried fish for a day's ration, a dog would eat up all his freight in traveling three weeks.

The natives of northern Siberia, as well as northern Sweden and Russia, have herds of reindeer, which furnish them food and clothing, and transportation. Oxen and horses need grass, but grass is not found in Alaska except for a few weeks in favored places. Reindeer moss grows on all places where trees do not grow, and in enormous quantities, so that there is a food supply for ten millions of reindeer in Alaska as a whole. The reindeer is the natural mediator between the arctic soil and the support of man. With herds of reindeer a constant supply of food and clothing of the best sort and rapid transportation of passengers and freight will be in the possession of the dwellers in northern and western Alaska.

The supply of reindeer moss for food.—Conceive all Alaska as one vast rock. The forces of nature—the sun, the rains, the frosts, the vital power of the seeds of the moss and of hardy trees—all these elements work on the rock to subdue it for vegetation. On the coast near the ocean, where the winds are laden with moisture, as well as in the river valleys, the first beginnings of vegetation appeared. The rock was eaten into by the moss plant. After the moss had flourished for untold ages it had created a humus or soil in which the seeds of other plants could take root. The moss epoch, then, was followed by the tree epoch. When the trees grew in the river valleys and on the coast regions the moss could not any longer flourish. But by this time the moss had conquered the rock regions far up the mountain sides

and over all the hills in Alaska, even up to the Arctic Ocean. This gives at one glance the actual view of the situation in Alaska. Around the southern coasts and in the river valleys trees flourish and moss is not found. Back on the hills and for a mile up the high mountains reindeer moss is to be found in immense quantities. A careful estimate finds sufficient food for ten millions of reindeer, basing the estimate on the present capacity of Finland and Lapland for the support of the reindeer.

But the routes for reindeer travel must not be laid out in river valleys nor along the coast of the ocean. The reindeer would starve on account of lack of moss. This was the actual experience in the journey made by Mr. Kjellmann in the winter of 1897 from Port Clarence south to Bristol Bay. He accomplished the other parts of his journey, even the scaling of high mountain passes, without difficulty, but in attempting to conduct a portion of his return journey through the forest between the Kuskokwim and Yukon rivers he could not find moss enough to subsist his reindeer except by cutting down trees and using an inferior quality of moss. As it was, a half dozen of his deer perished. These reindeer journeys can be accomplished only on trails leading over the hills above the river valleys.

In my last report I discussed the mail routes that could be used:

1. The Yukon Valley, from its head waters near Dyea to St. Michael, near its mouth—all its settlements could be brought into postal communication throughout its entire length by reindeer express. The mail would be brought to Skagway to the steamers that run to Seattle.

2. A side route up the Tanana and down the Copper River to the ocean, or by the Sushitna to Cooks Inlet, would furnish a mail route entirely within the United States.

3. A coast line from Cape Prince of Wales to St. Michael, connecting the settlements at Cape Nome and along Norton Sound, with perhaps a northern route from Cape Prince of Wales to the settlements around Kotzebue Sound on the Arctic Ocean as far north as Point Barrow, would make possible communication with whaling fleets that winter in those regions as well as with the schools and missions.

4. At Nulato the Yukon bends south and runs some 350 miles to its mouth. An express line connecting the settlements on this part of the Yukon as well as those on Kuskokwim and Bristol Bay at the south would complete the mail routes necessary to connect all of inhabited Alaska with civilization in the States.

There would be substantial cabins with caches of food every 20 miles on a reindeer route, the food being for the men and not for the animals. The reindeer with his tough lips and shovel-shaped hoofs can find moss under the snow at any point in Alaska except the forest regions which line the rivers and southern coast.

I give the location and other particulars of the missionary stations and schools in the regions mentioned above:

1. On the Arctic are located the following:

Location.	Denomination.	Teachers.
1. Point Barrow	Presbyterian (Government school) .	One missionary and one Government teacher.
2. Point Hope.....	Episcopal	Do.
3. Kotzebue Sound	Quaker.....	Three missionaries.

With herds of from 1,000 to 5,000 at each of these stations, there need never be any fear regarding the whalers who are caught in the ice before reaching Bering Strait on their way south. If they can not bring their vessels to the protected harbors near by the missionary stations they can at least escape over the ice and obtain sure subsistence until springtime. They can load their vessels, in fact, with supplies from one of these stations and on the breaking up of the ice in the spring continue their whaling voyage.

2. The following missionary stations are located along the coast from Bering Strait to Unalaska, in the Bering Sea:

Location.	Denomination.	Teachers.
4. Cape Prince of Wales.....	Congregational.....	Two missionaries.
5. St. Lawrence Island	Presbyterian	One missionary.
6. (St. Lawrence Island	Government school	One teacher.
6. Golovin Bay	Swedish Evangelical.....	Three missionaries.
7. Kangeksook	do	Two missionaries.
8. Unalaklik	do	Four missionaries.
9. St. Joseph	Roman Catholic.....	Seven missionaries.
10. Cape Vancouver.....	do	Two missionaries.
11. Bethel	Moravian	Five missionaries.
12. Carmel	do	Four missionaries.

3. The missionary stations on the Yukon are the following:

Location.	Denomination.	Teachers.
13. Ugavig.....	Moravian.....	Two missionaries.
14. Ihkamute.....	Roman Catholic.....	One missionary.
15. Koserefski	do	} Eleven missionaries.
16. Sacred Heart	do	
17. Anvik	Episcopal	Three missionaries.
18. Nulato	Roman Catholic.....	Do.
19. Circle City.....	Episcopal.....	Two missionaries.

While the stations on the Arctic Sea are of vital importance for the safety of the whaling fleet, those on the Yukon are of vital importance for transportation in the winter time, and besides the missionary stations there will doubtless spring up many camps of miners from the middle Yukon on to its highest sources and also along all of the tributaries on which gold may be found. It is too much to expect that miners will raise herds of reindeer, or indeed that reindeer can possibly be raised in the immediate vicinity of a mining camp, but the missionary stations removed at a safe distance from these villages can produce hundreds and thousands of reindeer, together with skilled natives who have learned to speak the English language and have acquired the manners and customs of our people. These will become herdsmen and teamsters for the mines.

4. The Aleutian Islands. One of these, (20) Unalaska, has a missionary establishment, Methodist, with 3 missionaries and 1 Government teacher.

The Aleutian Islands are all said to be moss bearing, and they should all have herds of reindeer. If not tame, at least a few should be placed on each island to run wild and stock the pastures.

5. The missionary stations and Government schools along the northern Pacific coast between Sitka and Unalaska are:

Location.	Denomination.	Teachers.
21. Wood Island.....	Baptist	Four missionaries.
22. Yakutat	Swedish Evangelical	Three missionaries.
23. Kodiak (Government school) .....	.....	One Government teacher.
24. Afognak (Government school) .....	.....	Do.
25. Unga (Government school) .....	.....	Do.

The voyage from Sitka to Unalaska, almost directly west, is 1,200 miles. Along this coast the above missionary stations and schools are established. Communication with the interior of Alaska from these stations will be made possible by the possession of reindeer herds.

6. The missionary stations and Government schools in the Sitka archipelago at the southeast are:

Location.	Denomination.	Teachers.
26. { Haines.....	Presbyterian	Four missionaries.
Haines.....	Government school.....	One teacher.
27. { Hoonah.....	Presbyterian	Four missionaries.
Hoonah.....	Government school.....	One teacher.
28. Juneau	Presbyterian	Three missionaries.
29. Juneau	Episcopal.....	One missionary.
30. Juneau	Roman Catholic.....	Three missionaries.
Juneau	Two Government schools	Three teachers.
31. { Douglas.....	Quaker	Three missionaries.
Douglas.....	Two Government schools	Three teachers.
Sitka.....	Presbyterian	Twelve missionaries.
32. Sitka.....	Three Government schools.....	Eight teachers.
33. Sitka.....	Episcopal.....	One missionary.
34. Kake	Quaker	Two missionaries.
35. { Fort Wrangel.....	Presbyterian	Do.
Fort Wrangel.....	Government school	One teacher.
36. { Saxman	Presbyterian	Two missionaries.
Saxman	Government school	One teacher.
Jackson.....	Presbyterian	One missionary.
37. Jackson.....	Government school	One teacher.
38. Metlakahla	Independent	One missionary and assistants.
39. Ketchikan.....	Episcopal.....	One missionary.

The missionary stations furnish centers where the English language is taught and where, with the language, are taught English manners and customs, habits and occupations. At the stations in Arctic Alaska the best-qualified natives can be found for apprenticeship as herdsmen and teamsters for the reindeer service.

The reindeer team in Lapland and Finland, over a smooth, hard snow surface, often makes 100 miles a day. Mr. Kjellmann, the superintendent of our reindeer herd at Eaton Station, north of St. Michael and east of Unalaklik, made 85 miles in twelve hours on one occasion with a reindeer team. At the easy rate of 5 miles an hour, with a relay every 20 miles, and with a change of teamsters every eight hours, a mail route of 500 miles could be traveled in five days, for where darkness holds for twenty-four hours the night hours are as good as

day hours for travel. With the shelter cabins well built 20 miles apart on the route, and with relay stations every 50 miles, the journey from Dawson City to Bennet, at the railroad terminus, 40 miles from Skagway, in the Klondike, could be performed by a United States and Canada express company in six or seven days; from Dawson City to Circle City in three days; another three days to the mouth of the Tanana; three days more to Nulato, on the lower great bend of the Yukon, and two days more to St. Michael, or two weeks and a half from St. Michael to Skagway. Across the ice in winter Cape Prince of Wales is three days' distance from St. Michael (traveling by relays night and day), and Point Hope seven days, and Point Barrow twelve days via Cape Prince of Wales. Cape Prince of Wales, at Bering Strait, could be reached in three weeks from Bennet by reindeer express. But the first journeys, performed without relays, and with imperfect knowledge of the best trails, will require daily intervals of rest, and it will take a week to do what will by and by be done in three days.

The reindeer imported from Siberia numbered 554 up to 1895. In the years 1896 and 1897 none were added from Siberia, but the 554 had increased to 1,466 by June 30, 1897. In 1898 161 were obtained from Siberia, and although 180 had been used for food and 66 more had been lost in the expedition to Point Barrow for the relief of the sailors imprisoned in the ice, the total head surviving October 1, 1898, numbered 1,918. This number is swelled to 2,062 by the addition of 144 deer turned over from the War Department as the survivors of the herd purchased in Lapland for the relief of the miners reported to be starving in the Klondike mines.

The conditions of northern, central, and western Alaska have been fully described above. The problem of southeast Alaska is a quite simple one in comparison. It is in constant communication with the Department of the Interior at Washington throughout the year. It lies entirely in the region covered by trees and no reindeer moss grows there, hence the reindeer question does not concern southeast Alaska; but there are gold mining, salmon fishing, and the fitting out of adventurers bound for the mines of central Alaska.

REPORT OF HON. JOHN G. BRADY, GOVERNOR OF ALASKA, ON REINDEER.

[From Annual Report of the Governor of the District of Alaska to the Secretary of the Interior, 1899,
pages 28-30.]

REINDEER.

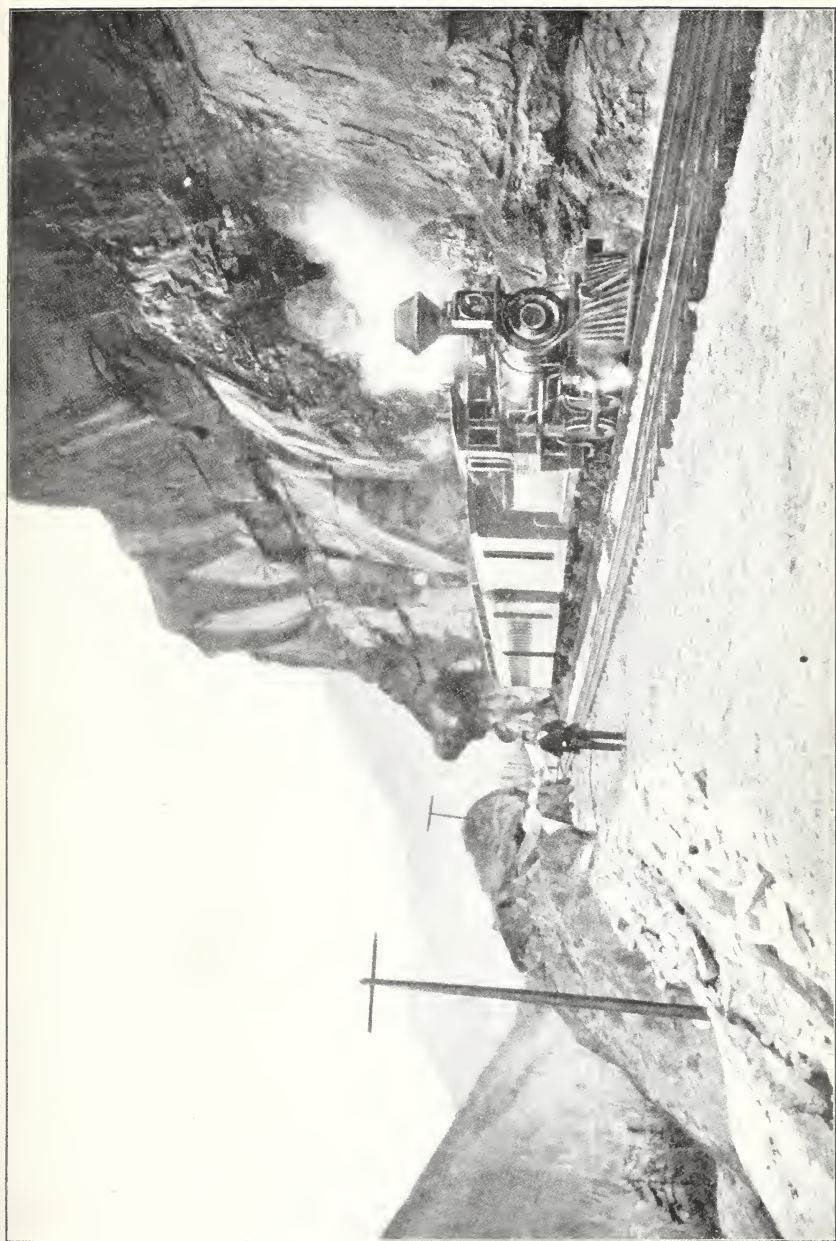
This interesting animal belongs to the frozen zone. He loves and thrives upon a moss which is popularly known as "reindeer moss."

This valuable member of the vegetable kingdom grows to the very border of the Northern seas. The reindeer has been domesticated for generations and has afforded the Lapp, the "Chukchee," and other tribes of northern Asia certain subsistence. His flesh is nutritious and especially rich in carbon, a requirement in food for those cold regions. The milk is utilized and made into cheese, the horns are made use of in many ways, and there is nothing that can be compared to the reindeer skin for clothing to withstand the rigor of a Northern winter. In fact, every part of the animal is utilized, and for transportation he is used for drawing and packing loads. All the foregoing was well established years ago. When the officers of our revenue service made their annual cruises to Bering Sea and the Arctic Ocean and saw the helpless condition of the Eskimos they wondered why these natives could not be supplied with reindeer and be as certain of subsistence as are the people just across Bering Straits who are supplied with herds. These officers could well understand that the animals upon which our people were depending were procured with greater difficulty each year. The seal, the walrus, and the whale were game for the white man, who, with his superior appliances, could chase them beyond the reach of the native. It was a question, too, whether the natives on the Alaska side would be willing to abandon their dogs and settle down to the lives of herders; whether they really valued the reindeer enough to make the change. A great many other questions came up which nobody could answer—would the "Chukchee" be willing to sell them; if so, could they be transported, and if they were successfully transported would they be protected from the ferocity of the huskiy and malamute dog?

The occasion demanded a man of a peculiar type, and, like Cæsar, "He came, he saw," and, in the opinion of the friends of this enterprise, has "conquered." Dr. Sheldon Jackson became so impressed

with this problem that he could not help but give it his immediate attention. He began to collect all possible information in regard to the animals and concerning Alaska as being fit ground for their cultivation. The Bureau of Education, under its Commissioner, Dr. William T. Harris, has wisely determined to try to give these Eskimos an industrial education in the art of rearing these animals. Such knowledge will make for their salvation for the life that now is. It was hard to prevail upon Congress to make an appropriation to start such an enterprise. Money was raised by an appeal through the public press, and a trial was made. Thoughtful men in both Houses of Congress pondered over this question, and the more they did so the more it met with their approbation. It was through them that the Government made its first appropriation. Very few persons have really kept posted in this matter, but many have not hesitated to ridicule it and have steadily endeavored to bring it into disrepute. Even editors of some of our newspapers have been reviling its chief promoter and speak of the enterprise as a "fad." This may have been brought about in part by the failure to carry supplies to the Klondike in the winter of 1897-98. The purchase of several hundred of these animals in Norway and Lapland and their shipment across the Atlantic and the continent, and by steamship again from Seattle to Haines Mission, and the dying of a large percentage of them at that point, and all the subsequent evils, had nothing whatever to do with the problem of the introduction of domestic reindeer into western and northern Alaska for the use of the Eskimos. When editors and writers raise the cry of "failure" and "fad" they simply show that they are not acquainted with the facts, or, if they are, that they are prejudiced and are not willing to stick to the truth.

At the very time that the cry of starvation was raised in the newspapers concerning the miners on the Klondike another cry went up that a large number of whalers at Point Barrow were caught in the ice and unless they got relief many would starve to death before spring. Accordingly the revenue cutter *Bear* was outfitted and sent off to give relief. She landed a party of three officers—Lieutenants Jarvis and Berthoff and Dr. Call. Under conditions that try men's souls they made their way from the spot where they were landed at Cape Vancouver, a long distance south of the Yukon River, around the margin of the coast, till they came to the missionary reindeer station at Port Clarence. Here Mr. W. T. Lopp and the native Eskimo, Antisarlook, at the earnest entreaty of Lieutenant Jarvis, turned over their herds of reindeer to him, amounting in all to 437 animals, and the natives not only parted with their animals, but volunteered to go with Lieutenant Jarvis to drive them to Point Barrow. After several fearful weeks they reached that station and gave immediate relief to those hungry men and kept them alive until the ice



SCENERY WHITE PASS AND YUKON RAILWAY, ALASKA.





DOUGLAS, ALASKA, SCHOOL NO. 1, LOWER GRADES.

Miss Kate Spiers, teacher.

Photo by Winter & Pond.



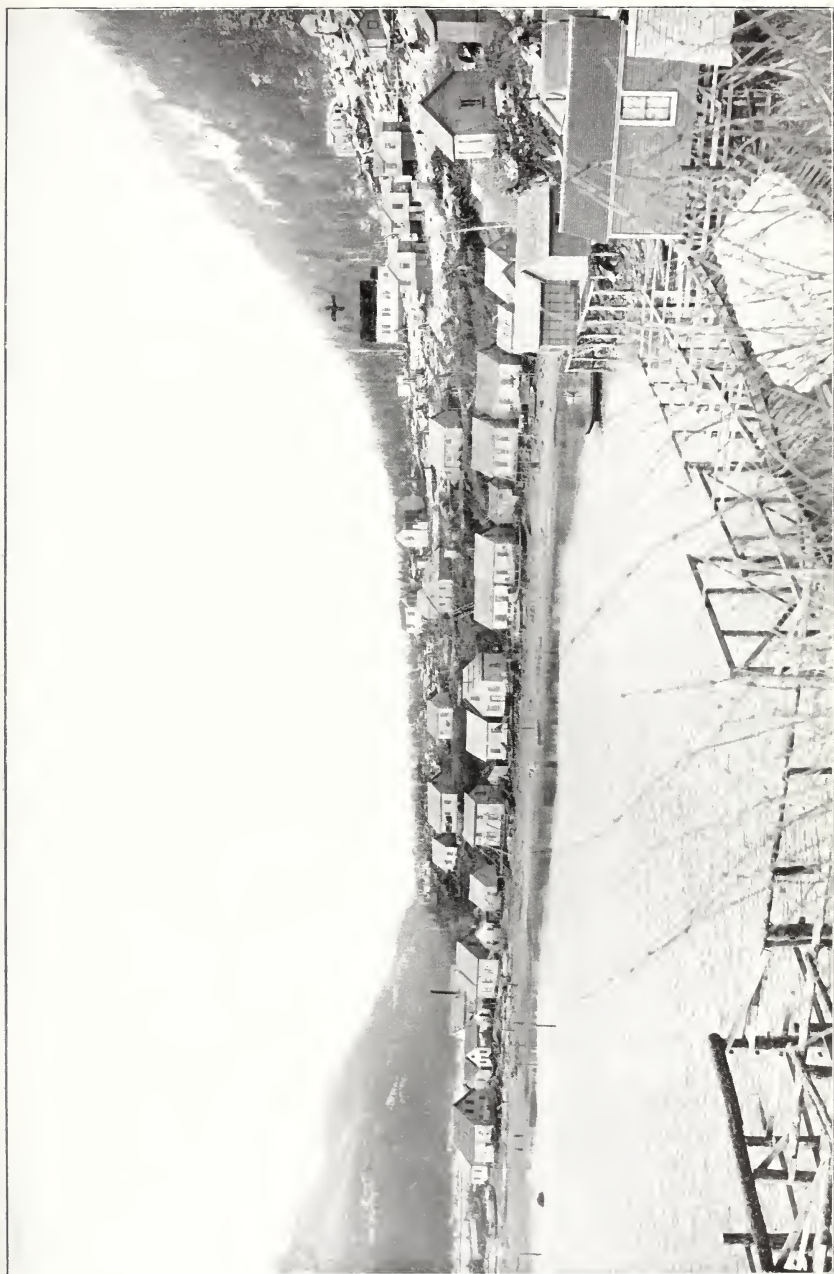


DOUGLAS, ALASKA, SCHOOL NO. 1, ADVANCED GRADES.

Miss Gertrude Spiers, teacher.

Photo by Winter & Pond.





Native village.

AUK INDIAN VILLAGE, JUNEAU, 1898.

Public school No. 2.



pack broke up. About 100 of these animals had to be slaughtered. Surely there was no "fad" about reindeer at this point. The food that they afforded kept 200 souls alive. Who has ever seen a single notice of this event to the credit of the reindeer, the missionary, or the native? Attention was called last year to the heroism of the above-mentioned officers. It will surely compare well with any act of bravery that has occurred within recent years, and we think that Congress should not allow another session to pass without giving them due recognition. The Treasury Department should feel proud that it, too, has men who are willing to dare and do and lay down their lives if necessary when duty and necessity demand them.

It is well ascertained now that there is pasturage for several millions of reindeer in northern Alaska. The Government, by purchase and increase, has succeeded in getting about 3,000 to the present time. Laplanders have been brought over as instructors, and a number of the natives have been brought up under their care. They are all anxious to obtain herds. The animals have been given out to missionary societies under certain conditions. One of these is that they are to return the number intrusted to them at the end of five years, they keeping the increase. The animals are prolific; half the yearling does will have fawns at the end of their first year and about half of these fawns will live and come to maturity. The great question is how to get more of these animals. Since the excitement at Cape Nome began the whites are beginning to understand what utility there is in a reindeer. There is great competition now for the purchase of the skin for clothing. The price has gone up from \$1.50 to \$8 and \$10 for a summer pelt. The meat brought in from Siberia by schooners was selling at \$1 per pound. The draft animals were used last winter in conveying Government stores to Cape Nome and in hauling for the missionaries who had claims on Anvil Creek. It is related that a miner by the name of Hank Summers, who has prospected in southeastern Alaska and in various parts of the Yukon Valley, and has finally reached the coast near Port Clarence, says that he no longer wants or cares for dog teams, though these animals have done him faithful service in the past. This past year he has had one stag deer; he puts a load of 200 pounds on his back and strikes off to the place which he desires to prospect. All he has to do with his deer is to stake him out—the moss is on the ground ready for him. A man with 10 of these animals could strike off with an outfit to support him a whole year. If it ever became necessary he could kill one of them for food. It is believed that if our Western stockmen understood well what great advantages are to be enjoyed in the raising of these animals in those regions they would put large amounts of money into such enterprises. There can be no doubt that the cowboys would soon become deerboys and soon surpass the Lapp or Chuckchee in

the rearing and handling of these interesting animals. At the present time trained animals would bring \$125 per head at Cape Nome.

We are told that they can be reared at an expense not exceeding \$7 per head; some say even as low as \$4 per head. Mr. W. A. Kjellmann, who has been the superintendent of the Government herd for several years, tells us some interesting things concerning this animal. When not feeding or resting they spend most of the time in training their horns, which while in the velvet are very tender. By throwing their heads back on their shoulders they cause them to curve forward, but most of the training of the horns is done by their hind feet. This they do by continually stroking the horn to bend it forward; they start prongs where they please by kicking the tender shaft in a spot till it bleeds, when a bud will start; by turning their eyes in the sockets they seem to be able to look at their horns and endeavor to make one correspond with the other. Seldom or never have they horns alike. As proof of these statements he relates that one deer which was blind in one eye was not able to train his horns on the blind side, but that it grew in an ugly shape; another deer which was injured in its thigh and was not able to use its hind feet as heretofore had its horns grow up in straight shafts. Another interesting fact is that there is an oil duct between the toes of their hind feet, and that when the animal sheds its horns he keeps the place well oiled by rubbing his foot over it. It is known that in parts of Siberia these animals are larger than the ones now obtained from the Chuckchee. Photographs of them carrying Russian engineers and their theodolites have been seen. The Bureau of Education is now endeavoring to make the necessary agreement with Russian merchants to furnish a number of these animals, and, in fact, to supply as many as can be purchased.

Late this fall two white traders, who are married to Eskimo women and who have been successful at Cape Nome, have applied to Dr. Jackson each for a herd of 100 head, to be taken at the price which it costs the Government. How can it be possible for the Government to make a mistake in fostering and encouraging such an enterprise?

ANNUAL REPORT OF EATON REINDEER STATION.

By WILLIAM A. KJELLMANN, *Superintendent.*

EATON REINDEER STATION, ALASKA.

June 30, 1899.

SIR: I have the honor to submit the following statement of the operations of Eaton Reindeer Station for the fiscal year ended to-day:

In accordance with your instructions, this station was built during the fall of 1898, in a well-sheltered valley on the north bank of the Unalaklik River, about 8 miles from the sea shore. Logs were cut in the surrounding forests and whipsawed for the building material; only finished lumber was imported from the States. Considering the short and wet summer and our late arrival on the ground (August 5), the men did very well, erecting a main building, a warehouse, a workshop, and six cabins for the herders—all finished by the middle of October. These log houses are all in first-class condition and the best for this climate.

The Government property at this station—such as furniture, stoves, lamps, bedding, boats, seines, nets, sleds, harness, tools, etc.—is all in good condition. New boats, nets, and other necessary implements have been made to supply the increasing needs.

School was kept by Dr. F. H. Gambell, and I refer you to the special school report for particulars. The progress in school has been greater this past year than during any former year, and I give credit to the teacher for his hard and untiring labor, which accomplished such good results.

The herd has thrived very well on the new pastures around this station. The hills are dry and hard. This helped to clean the animals' hoofs, and there has been very little hoof rot; only two cases have been observed. During the summer and fall of 1898 a considerable number of male deer were trained to packing. All provisions and other supplies for the herders and apprentices were packed to the mountains by reindeer.

After sleighing became good, breaking and training to harness began. Seventy-three animals were broken in and trained during the winter, some of which made very long trips of 200 to 400 miles.

Notwithstanding the fact that the weather during the fawning season was not very favorable, the fawns did well. Of 208 fawns born 194 survived, 4 being stillborn.

The herd at this station consists of 737 animals, of which 714 belong to the Government and 23 belong to the apprentice Martin Jacobsen. Ninety-six of the sled deer belonging to this station were left with the Port Clarence or Teller Station herd for the summer pasture, and 2 were left with the Mission herd at Golovin Bay.

Of the 714 animals here 620 are full-grown and 194 are fawns. Those left at Golovin Bay and Teller Station are all male deer.

On account of ill health I was forced to stay in bed the greater part of the winter, and I was not able to do any traveling except one trip to the north as far as Sinrock or Antisarlook's place, during which trip I took sick.

During the winter the deer and herders were always on the road, engaged in freighting for this station and for the United States troops at St. Michael. In this way both apprentices and deer received a thorough training.

The results of fishing have been very good; accordingly, very few fish have been bought this year.

The supplies sent to this station last summer were sufficient, although we had to exchange some articles of which we had a plenty for others which were needed. The following is the monthly ration issued to each herder: Flour, 35 pounds; oat meal, 2 pounds; pease, $1\frac{1}{2}$ pounds; beans, $2\frac{1}{2}$ pounds; corn meal, 2 pounds; coffee, $2\frac{1}{2}$ pounds; cube sugar, $1\frac{1}{2}$ pounds; brown sugar, 3 pounds; chicory, one-half pound; butter, $2\frac{1}{2}$ pounds; chocolate, one-half pound; bacon, 8 pounds; roast beef, 2 cans; salt beef, 4 pounds; evaporated potatoes, $1\frac{1}{2}$ pounds; yeast, 1 package; baking powder, 1 tin; soap, 1 bar; matches, 1 package; tea, one-fourth pound; molasses, 1 quart. Sometimes this was varied a little in order to change food; that is, one kind of food was substituted for another.

The health of the people was generally good, thanks to Dr. F. H. Gambell's efficiency.

I hope that you will succeed in the reindeer enterprise in the future as well as you have in the past, until this region is stocked with deer—the animal so admirably suited to it. I ask you to keep on as you have commenced for the benefit and blessing of Alaska, notwithstanding the stubborn obstructions and misrepresentations that have come and will surely continue to come from people who do not know what they are doing. Keep on, and be sure that all real, disinterested friends of Alaska are with you in your work and look to you to carry it through.

Yours, very respectfully,

WM. A. KJELLMANN, *Superintendent.*

DR. SHELDON JACKSON,

General Agent of Education in Alaska, Washington, D. C.

MEDICAL REPORT, EATON REINDEER STATION.

By F. H. GAMBELL, M. D., *Resident Physician.*

EATON REINDEER STATION, ALASKA.

June 30, 1899.

DEAR SIR: Herein I have the honor of making to you my annual report of the duties devolving upon me as physician and surgeon of this station. Also, I have the pleasure of including, in connection with this report, a statement regarding the school and its work during the present year.

My duties began, as you are aware, at Port Townsend, Wash., where I first met with the Norwegians and Laplanders, who were then in charge of Regnor Dahl. I accompanied that division of the party embarking upon the *Louise J. Kenny* and after thirty-seven days rough sailing, with contrary winds a good part of the time, we reached our destination, Unalaklik, Alaska, "putting in" but once, namely, at Dutch Harbor, for fresh water.

Barring the sickness incident to a sea voyage, the health of the party was excellent while on board the ship, with the exception of one man who was suffering with acute pleuritis, having taken sick a few days before leaving land.

During the latter part of the voyage, when the sea was at its highest, and the waves were washing the deck, a little child was born to a Mr. and Mrs. Aslak Gaup, which was considered a good omen by the sailors on the ship. If the fair winds which prevailed thereafter were due to the fact that a child had been born, many were the passengers who regretted that such an event could not have occurred at the beginning of our long voyage.

When I visited the site upon which the station buildings were to be erected, I found it to be a dry and healthful place, well protected by a high bluff to the north, while to the south is a pleasing view of the valley of the Unalaklik and the mountains of the Yukon; looking to the west, the blue waters of the sea can be seen, while up the river the valley gradually narrows between the two mountain ranges until it is lost to view.

The river, which is at this place about seventy yards wide, with a good, strong current, furnishes excellent, clear, cool water for drinking and washing purposes, and drains the village as well as the surrounding country.

I find the Lap people at the station a hardy race, able to undergo almost an unlimited amount of exposure and hardship in this severe climate. The fact that two families have lived in tents during the whole winter, camping from place to place, as the herd moved from one pasture ground to another, proves the assertion to be true without a doubt. Of low stature, they are nevertheless strong and rugged, mostly free from hereditary diseases, and sensible as to their dress. The costumes of the men and women differ but little, both being clothed in a loose deer-skin coat, reaching to the knees; tight leggings and shoes, both of which are made from skin taken from the reindeer's legs, covering the lower part of their bodies. Their feet are wrapped in dry grass, which has been cut and cured in the fall. Often, during the coldest weather, this soft, bruised grass alone is used within the shoes—no stockings being needed. At the union of the shoes and leggings a long band of bright colors, woven by the women, is tightly wound around the ankle, and it serves not only to keep the shoe in place, but it keeps out the snow and wind.

The men wear four-cornered caps, with the top stuffed with feathers, while the women have close-fitting ones trimmed with narrow lace. The colors of the caps are varied, yellow, red, and blue predominating. All wear handkerchiefs, scarfs, or small shawls around their necks. The men have a neckcloth, at each end of which is a pocket, in which they carry small articles. The belt is another article universally worn, to which is attached a heavy hunting knife, used for an untold number of purposes.

There is no change in fashion, the little children even having clothes the exact counterpart of those of their parents, only smaller. Clothing ill adapted to this climate is unknown to them; nevertheless, the inevitable exposure has given me many an opportunity of relieving pain.

My practice has included the Government employees, the natives, the resident whites at Unalaklik, and the miners who have required my assistance. The natives have applied for medical aid and medicine quite freely. Patients have come to me from long distances. The Yukon Indians have been in my office for medicine, while natives from Kings Island, the Diomedes, and points along the shore have brought me their sick ones. Those near at hand have been visited frequently during their sickness. Miners traveling from the Yukon to Cape Nome have passed the station, and a good many have required medicine or medical aid. J. B. Logan, while on his way to Cape Nome, was taken sick with croupous pneumonia and was confined at the station



FRANCIS H. GAMBELL, M. D.,
Physician and acting superintendent of Eaton Reindeer Station, Alaska.
Photo by Hassal & Anschutz.



one month. Others with frozen feet, hatchet wounds, and minor complaints were glad to find that there was a physician here.

The resident whites, while not many, have required my services on several occasions in slight ailments, and once in a serious operation, when it became necessary to call in the aid of Dr. Gregory, of St. Michael. During the depth of winter Mr. Kjellmann, the superintendent, while on his way to Cape Nome, was taken sick on the other side of Golovin Bay and sent back for help. Dr. Southward, of New York City, who was stopping with me at the time, volunteered to go to his assistance, and was accordingly supplied with medicine and started with deer on the following day. He reached his patient and diagnosed his trouble as chronic appendicitis. His first attack has been followed by attacks less severe, but he has been kept from violent exercise since on account of them.

Following you will find a list of the diseases treated and the operations performed among the Government employees stationed here during the year; also the result of treatment:

Diseases.	Sex.		Results.
	Male.	Female.	
Bronchitis:			
Fibrinous.....		1	Recovery.
Chronic.....		1	Partial recovery.
Parotitis.....	18	10	Recovery.
Complicated with orchitis.....	1		Do.
Complicated with meningitis.....	2		Do.
Constipation, obstinate.....		2	Do.
Rheumatism, complicated with endocarditis.....	1		Death; age 57.
Pneumonia, croupous.....		1	Death; age 2 months.
Dyspepsia.....		2	Recovery.
Incontinence of urine.....		1	Do.
Varix.....	1		Improvement.
Pharyngitis, simple.....	4	3	Do.
Pharyngitis, chronic.....		1	Do.
Scorbutus.....	6	3	Do.
Do.....	1	1	No improvement.
Conjunctivitis:			
Acute.....	2		Recovery.
Complicated with corneal ulceration.....	1		Do.
Lumbago.....	1	1	Do.
Furunculosis.....	2		Do.
Catarrh.....	1		Improvement.
Gonorrhea.....	1		Recovery.
Enteritis.....	2		Do.
Mitral insufficiency.....	1		Do.
Dysmenorrhea.....		1	Improvement.
Parturition.....		5	Recovery.
Fish bone from throat.....		1	Do.
Extraction of teeth.....	6	12	Do.
Gunshot wounds.....	2		Do.
Removal of semilunar cartilage of knee.....	1		Do.
Paracentesis, thoracic.....	1		Do.
Total cases.....	60	46	

Minor cases, such as headaches, constipation, sprains, etc., have not been enumerated, although they were of almost daily occurrence.

Respectfully submitted.

FRANCIS H. GAMBELL,

Physician and Surgeon, Eaton, Alaska.

DR. SHELDON JACKSON.

General Agent of Education in Alaska, Washington, D. C.

SCHOOL REPORT, EATON REINDEER STATION.

By F. H. GAMBELL, M. D., *Teacher.*

DEAR SIR: As to the school work, I have the honor of making the following report: School opened on the 18th of October and closed on the 16th of June, being in session all the time, with the exception of the holidays and a spring vacation of a few weeks' duration. The enrollment consisted of 11 children, ranging from 5 to 16 years of age, and all guiltless of having spoken English. Their faces were bright and expectant as they gathered on either side of a rough table made for the purpose, and seated themselves on benches similar, probably, to the school benches of early times in other new settlements. Their first lesson was an object lesson, and so was their third and fourth, and so have all their lessons been during the whole year.

They are apt and quick to learn, and while they are anxious to advance in all their branches, they seem to give particular attention to their writing, in which they are very neat and careful.

Their attendance has been very good. Sickness alone has prevented them from coming, and in two or three instances I have sent them home after coming, as they were not in a fit condition to be in school. They have an average attendance of $97\frac{1}{2}$ per cent for the whole year, taking the figures from the register. Their punctuality has been as good as their attendance. Often during the short winter days I have had to light the lamp at the beginning of school, as they would come long before the stars had gone out of sight.

They have but few games and play very little, but they are always kind and affectionate and never seem to quarrel as they mingle together.

During the evenings in the fall and winter I have instructed those of the older ones who wished to come. While some attended, I think more will attend when they realize more fully their need of learning to speak the English language well.

As there have been no natives living near the station I have had no Eskimo children, although some have expressed their desire to have their children attend, and probably will move nearer next winter, that their children may come.

Respectfully submitted.

FRANCIS H. GAMBELL.

Dr. SHELDON JACKSON,

General Agent of Education in Alaska, Washington, D. C.

REPORT OF F. H. GAMBELL, M. D., ACTING SUPERINTENDENT EATON REINDEER STATION.

EATON REINDEER STATION, ALASKA,

September 25, 1899.

DEAR SIR: I take this opportunity of making a report before the last boat leaves.

The people at the station seem to be satisfied with the arrangements and changes which have been made during the summer. They are very obliging and kind and obey me without a word. Some of them are at work upon the pulkas, others are repairing harness and sleds, others are piling moss, and the remainder are employed in various ways. We are expecting the deer home at almost any time. They reported them being in excellent condition one month ago, when the herders were in for provisions.

The weather this year is more disagreeable than during the same season last year. We have had snow now for ten days—since the 15th of this month—with nine degrees of frost one night. It is warm enough during the day to melt most of the snow on the lowlands, which makes it very disagreeable getting around.

The health of the people is good, with two exceptions. Scurvy is still the trouble. I have come to the conclusion that it is, to a certain extent, an infectious disease. I made a barrel of vinegar from some spoiled sugar and will try the administration of it not alone as a curative, but more as a protective treatment.

I will inclose with this a copy of the ration list for our men and also Mr. Kjellmann's, that you may see to what extent mine differs from his.

Respectfully, yours,

FRANCIS H. GAMBELL.

DR. SHELDON JACKSON,

Washington, D. C.

Ration list.

Article.	1898-99.	1899-1900.
Flour.....pounds..	35	35
Oatmeal.....do...	2	3
Peas.....do...	1 $\frac{1}{2}$	1 $\frac{1}{2}$
Beans.....do...	2 $\frac{1}{2}$	.....
Corn meal.....do...	2	.....
Green coffee.....do...	2 $\frac{1}{2}$	3
Cube sugar.....do...	1 $\frac{1}{2}$	1 $\frac{1}{2}$
Brown sugar.....do...	3	3
Chicory.....do...	1	.....
Butter.....do...	2 $\frac{1}{2}$	3
Chocolate.....do...	.....	.....
Bacon.....do...	8	8
Roast beef.....do...	4	4
Salt beef.....do...	4	4
Potatoes.....do...	1 $\frac{1}{2}$	1 $\frac{1}{2}$
Yeast.....package..	1	1
Baking powder.....pound..	1 $\frac{1}{2}$	1 $\frac{1}{2}$
Soap.....do...	1	1
Matches.....package..	1	1
Tea.....pound..	.....	1 $\frac{1}{2}$
Molasses.....quart..	1	1
Milk.....cans.....	.....	2

TELLER STATION LOG BOOK, 1898-1899.

By T. L. BREVIG.

July 1: Partly overcast with strong southwest wind. A party of miners left for the Eaton River and Fish River district in the evening.

July 2: Overcast, with strong southwest to south wind, changing to northwest in the evening. Tautook went over to the anchorage with an engineer from a steam launch that had broken down in Grantley Harbor. Quiet around the station.

July 3: Overcast. Foggy all day, clearing at 9 p. m. A steam launch went over to the anchorage and the whaleboat with three miners went into Grantley Harbor. Light westerly to northerly wind.

July 4: Clear and bright in the morning, with rain and variable winds in the afternoon. Twelve miners visited on shore. Tautook and Wocksock were in for provisions and reported one female deer, and one male, belonging to Sekeoglook, dead from internal disease, the stomachs being filled with water; Tautook had killed one of his males for food.

July 5: Clear and calm in the forenoon. Strong and overcast in the afternoon. Six men from the bark *Alaska* and Captain Cogan came ashore in the evening and stopped with us on account of the storm.

July 6: Overcast and rainy, strong southwest wind until the evening. Several miners encamped on the beach. The *Alaska* passengers left in the evening. Sekeoglook reported all well at the herd.

July 7: Overcast, with strong southwest to south wind. Captain Cogan and a number of passengers were on shore and visited us in the afternoon.

July 8: Cloudy, with strong west wind, and some rain. Three miners went up to the Ahgeeopuk Creek to prospect.

July 9: Cloudy and foggy, with rain and light west wind. Captain Cogan and six men were on shore to get some wreckage; a boat arrived from the anchorage reporting the *Bear* in.

July 10: Clear, with a light west wind. The *Bear* came in in the morning and was boarded by Brevig and Ojello. Mail was received and a little news. Several vessels arrived and several left the anchorage. Kelly sent in a note from the anchorage reporting himself and assistants on the *Alexander*, and that 600 deer had been bought.

July 11: Clear, with southwest wind. Mr. Percival, a miner, came in from Ahgeepuk, having spent two nights on the mountains.

July 12: Clear, with light variable winds. A miner that had left his partners and was destitute came into the station and was given a few biscuits and sent away. The *Bear* left the anchorage for the north in the night.

July 13: Clear and bright, light variable winds. The *Alexander* towed the *Bonanza* in, and transferred Kelly and assistant to the *Bonanza*. The latter landed three miners that Liebes & Co. sent to prospect this country. Mr. Koltehoff was landed from *Bear* to await the arrival of Dr. Jackson. Percival left for the Ahgeepuk in the evening.

July 14: Clear, with light northeast and west wind; warm. The natives are gathering a good supply of fish. The *Bonanza* took water here.

July 15: Clear and warm, calm. Two miners made a short trip into the hills prospecting. The *Bonanza* left the anchorage.

July 16: Clear, with a strong northeast wind in the afternoon. Koltehoff and Vestal visited the herd. 104° in the sun.

July 17: Light west wind, partly overcast.

July 18: Overcast, with light west wind in the forenoon, calm in the afternoon. The *William Baylis* left the anchorage in the evening, and the *Alexander* came in.

July 19: Overcast, and raining some.

July 20: Partly overcast, with light northwest wind.

July 21: Clear, with a medium strong northeast to north wind. Mr. Koltehoff and two miners went up to the Eaton River to prospect.

July 22: Clear and warm, with a strong northeast to north wind in the afternoon. The schooner *Laurel* from Seattle came in early in the morning, and Dr. Van Dyke with a party of four visited on shore in the afternoon. They will probably prospect around here.

July 23: Clear, with a medium strong northeast to east wind. The *Laurel* went to Nook and anchored there in the morning. All the vessels but the *Thrasher* left the anchorage during the day.

July 24: Clear, with very strong east wind. In the evening Tautook and Sekeoglook arrived with Wocksock's wife and boys to get barrels and salt to pickle fish; they also brought in two barrels of salmon. All well at the herd.

July 25: Partly overcast, with strong east wind until evening; a slight shower at 6 p. m. The *Laurel* entered Grantley Harbor at 4 p. m. An old Cape woman died on the beach at noon. A severe attack of coughing prevails among all.

July 26: Partly overcast, with strong northwest wind. A steam bark anchored at the spit at 11.30 p. m. last night.



REV. AND MRS. T. L. BREVIG AND DAUGHTER, TELLER REINDEER STATION.

Photo by Larson.



July 27: Overcast, with strong north wind and a light drizzle. Owoodlet, a young man from the village, and a herder at the station under Mr. Lopp, died from lung trouble in the afternoon. Nearly all the people are sick with a cough. A two-masted schooner anchored some distance offshore at 8 p. m.

July 28: Overcast, with medium strong north wind, changing to southwest by west in the afternoon. The vessel was Mr. Miner Bruce's trading schooner back from Point Hope. Mr. Vestal and Koltchhoff came back from the lakes in the evening and will probably start out again to-morrow.

July 29: Overcast, with light west wind and showers. Mr. Bruce's vessel went out in the evening. The *Thrasher* is still lying lone and forlorn, waiting for the *W. D. Peters*.

July 30: Overcast, with strong south to southwest wind and showers. Dunnak's baby died in the forenoon and was buried with its mother. Tautook and Sekeoglook came in for provisions and report one fawn dead. Mr. Percival and Owen came in in the evening, having given up the Ahgecopuk, and are going to Kotzebue.

July 31: Clear, with light north to northeast wind. Vestal and party left for the lake region at 9 p. m.

August 1: Clear, with a strong southwest wind in the afternoon. A native was reported trying to sell whisky on the beach, and I went down and found him with two bottles, which I took away from him and smashed.

August 2: Overcast, with a very strong southwest to south wind and high surf all day. A three-masted vessel anchored at Point Spencer.

August 3: Overcast, with medium strong southwest to south wind and rain all day. The *Laurel* came in from Grantly Harbor in the evening.

August 4: Overcast, with a medium strong northwest wind. The *Laurel* took on water during the day, and Mr. Percival and party went on board. The *Del Norte* came in at 10 a. m., and Dr. Sheldon Jackson, Dr. Gambell, and several others came on shore; also Captain Allen. The *Del Norte* left again at 12.30 p. m. for St. Lawrence Bay, Siberia. Three miners were landed here to prospect. Some news was received.

August 5: Clear and calm. Two miners went out in a northwest direction prospecting. Packing.

August 6: Clear until evening, when a strong southwest by south wind sprung up and clouded over. The *Louise Kenny* came in early in the morning and landed four Laplanders and Fredrick; also six miners. Ojello and family left for Point Hope on the *Kenny*. The whaleboat arrived at 5 p. m. with Mr. Koltchhoff. Tautook and Wocksock also came in, reporting one deer dead for Sekeoglook.

August 7: Clear, with a strong southwest to south wind. Very quiet.

August 8: Clear and calm. A fishing crew came in from the *Belvedere*. Two Lapps went out and pitched camp beyond Cape Riley to receive the deer when the *Del Norte* arrived. The deer house was torn down and also the old warehouse. The miners were building boats.

August 9: Clear and calm. Packing was finished, and the old warehouse torn down. The miners were building boats all day. The *Belvedere* left the anchorage at 11 a. m., steaming north.

August 10: Clear and calm. The interior of the new building was torn down and part of the lumber carried down on the beach. One of the Laplanders got a rusty nail through his foot and was treated by Dr. Brandon.

Teller reindeer station at Port Clarence discontinued after August 10.

EATON STATION LOG BOOK, 1898-99.

By WM. A. KJELLMANN.

August 5: The superintendent, Mr. William A. Kjellmann, with party, arrived at 5 p. m. on the ground selected for the new quarters of the Government's reindeer station. The flag was nailed to the top of a spruce tree and saluted with waving hats and cheers.

August 6: Part of the crew cleared the ground of scrub bushes, and part erected a temporary warehouse. Mr. Dahl arrived with a load of goods and additional employees.

August 7: Sunday. Clear, calm, sunny day. Keeping Sabbath.

August 8: Continual clearing of ground. A temporary kitchen was erected and three men set to cooking for the people, who are divided in three messes.

August 9: Clear, calm. A railroad surveying party went up the river. Commenced digging for foundations for log buildings. One boat load of goods was brought up from the beach.

August 10: Clear, calm, sunny. Logs were overhauled; a temporary house for issuing rations was erected.

August 11: Partly overcast in forenoon, a little rain in afternoon. Foundations for two houses finished. Mr. Dahl makes daily round trips carrying up goods, assisted by two Eskimos with their boats and ten of the drivers.

August 12: Clear, fine day. Four foundations finished. The logs were carried from the river bank to the different foundations. Four whipsaw scaffolds were put up for sawing the logs.

August 13. Clear, fine day; rather warm. Piles of scrub were burned to-day. Six men have been cutting birchwood for "pulks?" and sleds. One of the whipsaws in operation.

August 14: Sunday; clear, calm; keeping Sabbath.

August 15: Four log houses, 20 by 16 feet, were started, and all four whipsaws in operation. Rainy with easterly wind.

August 16: Cloudy; rain in showers; wind southwest. One of the cooks reported sick and had to be replaced. Building on the four houses and sawing goes on. Three men making sleds. One carrying moss. One man and all women and children cutting and curing hay for boot padding. Goods arrived.

August 17: Partly clear. The steamer *Del Norte* arrived at Unalaklik from Siberia; the superintendent with five men went down to help discharge and get news. One of the builders cut his foot very badly with an ax.

August 18: The superintendent arrived with a load of goods at 1 p. m. Southwest breeze. At 6 p. m. Dr. Gambell arrived, and at 8 p. m. Mr. Dahl with his crew brought three loads of goods. The doctor attended to the sick.

August 19: Clear; east wind, rather strong; weather a little colder. The doctor stayed in camp. The log houses and sawing go on, as well as the making of sleds and gathering of grass.

August 20: Dry and clear; southeast wind. Very fine day. Work goes on as yesterday. Superintendent went up the river to look for more logs. Dr. Gambell left in the evening, after having attended to the sick.

August 21: Sunday. Strong northwest wind with rain, which changed into calm, dry, beautiful day. Two prospectors with six natives passed up river. Observed the Sabbath.

August 22: Partly overcast, with calm. Seven men were detailed to go up river for more logs, which are required to complete the houses. Mr. Dahl arrived with a boat load of goods and returned to Unalaklik. Everyone else busy on log houses.

August 23: Calm, clear, and quite a warm day. The logging party returned with 35 logs. Goods are daily arriving in charge of Mr. Dahl. One man has a slight attack of chills and fever.

August 24: A clear, glorious day, with a light northwest breeze. Parbuckled the logs, hewed and carried them to the houses as fast as possible. Everybody shows will and diligence to hurry up and finish the houses. Two prospecting parties going up the river. Mr. Dahl arrived with timber. Dunnak received his ration and reported the herd in excellent condition.

August 25: In the early part of the day, clear with a strong southeaster, which in the afternoon changed into calm with frequent light showers. Discharged 2,000 feet of lumber. William A. Kjellmann took 9 men down to the beach to build a raft of the remainder of the lumber and try to tow it up on one trip, which will save a great deal of time as the material is needed immediately.

August 26: Cloudy and calm, with some heavy rain, thunder, and lightning. The log cabins begin to appear quite cozy and respectable on account of the good workmanship on them. Two prospectors are making their way up the river to the hidden treasure.

August 27: Rainy and calm. The surveying party returned from up river, gave three hearty cheers as they passed the station. William A. Kjellmann and Mr. R. Dahl arrived with two boat loads of goods.

August 28: Cloudy and almost continual rain the whole day, with

southeast breeze. Kept the Sabbath, which the Laplanders observe strictly.

August 29: Partly overcast, with a light breeze from the southeast. Clearing and laying foundations for warehouse and additional living houses. A party detailed to proceed with the raft, which is halfway up. R. Dahl did not arrive on account of an attack of rheumatism. Three boat loads of lumber were discharged. Martin, with two deer, arrived here reporting the herd in fine condition; departed with two packs.

August 30: Clear, warm, with a light westerly wind; an exceptionally delightful day. Tornensis in from the herd with a deer, returning with a pack; three loads of lumber arrived. R. Dahl still ill in bed.

August 31: Cloudy, with a northwest wind; last load of lumber arrived. R. Dahl quite well again, takes mail to St. Michael to-morrow in the whaleboat if the weather is favorable. Six prospectors going up river. Everybody busy; activity all around the station. Superintendent William A. Kjellmann issued the rations.

September 1: Partly overcast, with northwest wind and a few light showers. Superintendent with six men in the whaleboat left for the Swedish mission. R. Dahl did not start to-day on account of the head wind. William A. Kjellmann returned. Magnus Kjelsberg is in charge of the storehouse since R. Dahl departed. Rumor of finding the color of gold up river.

September 2: Cloudy, with a storm from the west; heavy showers, with some heavy hailstorms. Dr. Gambell paid a visit with mail from the south, and very favorable reports from the placers at Golovin Bay; several of the men here have claims there; Paulsen arrived. Received a very fine present from Mr. Karlsen of a dozen large heads of beautiful lettuce.

September 3: Slightly overcast, with a light southeaster. Rafted down 17 logs.

September 4: Cloudy, rainy, and with southeast breeze. Observed the Sabbath.

September 5: Partly overcast, with a few rain showers and a strong southeast wind. Commenced to whipsaw logs for timber in the main building. Cured hay received and stored every day for future use in boot padding. Four men are felling and rafting logs. One cabin ready to be occupied by Dr. F. H. Gambell.

September 6: Dry and partly clear, with a strong southeaster. Otto Leinan and Peder Berg making nets, as they are both unable to do other duties, being on the sick list. Dr. Gambell arrived. Thawing is done to get the necessary depth that is required for the foundations.

September 7: Cloudy and rainy, with a northwest wind. A scow load of hewed timber towed up and discharged. The warehouse is

under construction. Dr. Gambell moved into his new cabin, which is divided into two rooms, one for a dispensary and the other for a living room. Mr. Dahl and party are expected from St. Michael; arrived at Unalaklik after an extraordinarily smart sail of eight hours.

September 8: Partly clear, with a northwest wind. Two prospectors going up river. Two natives from the Yukon passed down the river on a raft.

September 9: Clear, dry, and beautiful weather, with a light northwester. Whipsawing 2 by 8 timber for studs and rafters. Eaton station now looks like a settlement.

September 10: Clear, dry, and very fine, with a moderate wind from northwest. Dunnak in from the herd and reported one deer dead. Still bringing up goods from the beach.

September 11: Clear, calm, and beautiful. Two prospectors, acquaintances of Superintendent William A. Kjellmann, enjoyed a hearty but plain meal; they believe there are paying prospects up river, consequently they intend to work there this winter. No service, but everybody observed the Sabbath.

September 12: Quite clear and dry with a light, easterly wind. Mr. William A. Kjellmann, Dr. Gambell, and R. Dahl went down to the mission. R. Dahl, Krogh, M. Kjelsberg, and W. Basi are going up to Golovin Bay to stake out and record claims. Tanning skins and drying hair is done by one man; all the others are engaged in working on the warehouse which will be a good, substantial building, 60 by 20 feet, with two stories; timbers are being hewed for the main building; two men are making pulkas; women and children are curing hay. The superintendent and Dr. Gambell returned with a box of assorted vegetables from Mr. Karlsen.

September 13: Clear, beautiful, and quite warm, with a northwester. A trail for hauling and packing is being cut. The warehouse is nearing completion. Dr. Gambell is teaching the most ambitious young men the English language, in the evenings, after the day's labor is ended.

September 14: Clear, warm sunshine, with a southeaster; first time this season; cold nights, rain and hail in the afternoon. One carcass of a male deer brought in, the first deer meat in the season. It died from injuries received in fighting.

September 15: Slightly overcast, with southeast wind; quite a pleasant day. Two cabins are being built; when they are finished there will be sufficient accommodations for all. Nets and seines are being mended. Prospectors are going back to their winter quarters. An Eskimo party returned home from their fishing trip or perhaps a "potlatch." Finished roofing the warehouse.

September 16: Gloomy and overcast, with a light northwest wind. Dr. Gambell is visiting the herd, which is about 6 miles due south

from here. Two large parties of natives are going up the river to their winter home. They are probably from St. Michael. Children are picking berries for winter use. Commenced laying the stone foundations for the main building. A more suitable and convenient spot than Eaton Station for headquarters and breeding station is surely impossible to select. We have wood, fish, grass for boot padding, and plenty of several kinds of berries, a stone quarry, plenty of moss, and shelter for the reindeer.

September 17: Clear, dry, with a northwester. Johan Tornensis, in from the herd, reported Dumnak sick to-day; he got medicine. One of the dogs has six lively pups. Two prospecting parties going up river.

September 18: Clear, warm, and beautiful. Three men are going up the river and will assist a party with their outfit to the placers, more to get acquainted with the river than anything else. Received a sack of vegetables from Mr. Karlsen; choice specimens of Alaska produce. Keeping the Sabbath.

September 19: Partly overcast, with a southeast breeze. Continuous house building and preparing to keep warm in the winter; have finished twelve pulkas.

September 20: Overcast but dry, with quite a breeze from the southeast. The trail is finished and a bridge has been constructed. Aslak Gaup, in from the herd after his baggage, reported several deer sick. Dumnak still sick and unable to do duty.

September 21: Clear, warm, and beautiful during the day, with a strong southeast wind. Commenced storing goods in the new warehouse. Quite a sawmill is in operation whipsawing materials for the construction of the main building, which requires a great deal of timber; everybody busy. This is a place for a good all-around man for the position of assistant; one is needed very badly. The superintendent is the most busily engaged man at the station, as he is the only person who is capable to advise, construct, and oversee work and issue rations and clothing. He has to be everywhere from dawn to dark and is a regular "hustler." Nakilla's and Tornensis's families arrived from the last camp on the beach. First logs for main building.

September 22: Clear, fine, glorious weather, with southeast wind; first frost in the season. The main building is being put up as rapidly as it is possible for human effort to do it. Dr. Gambell is grubbing and preparing a patch of ground for vegetable raising next year. The remainder of the people arrived from Unalaklik. The entire colony is now on the ground prepared for almost anything.

September 23: Cloudy, cold, with a light southeaster; first snow in the season. A storeroom, which will be connected with the main building, is temporarily used as a living apartment by the superintendent. Dr. Gambell visited Unalaklik.

September 24: Calm and overcast, but quite warm during the day. Another cabin is being put up, which will make 5 houses finished, with accommodations for 60 or 70 persons. The three men who went up river returned, reporting geese, ducks, and grouse plentiful.

September 25: Cloudy and rain, with a light northwest breeze. Keeping the Sabbath.

September 26: Clear, with a strong southeast breeze; snow covers the surrounding mountain tops. Logging, rafting, and hewing timber are in full operation to answer the demand for materials which the main building has created. Dr. Gambell arrived from Unalaklik, bringing some mail for the superintendent.

September 27: Cloudy and overcast, with some sleet and southeast wind. The superintendent moved into the temporary dwelling.

September 28: Calm, cloudy, and rain. Rations were issued. Moss is being packed up for the winter forage. On account of the shortening days, only half an hour is allowed for dinner, which still makes ten hours of labor.

September 29: Gloomy and overcast, with rain.

September 30: Clear, mild, and beautiful, with light northwest breeze. Martin, Tornensis, and Aslak in from the herd with six pack deer for their rations. Work commenced on the second story of the main building. It begins to appear quite imposing on account of its lofty elevation.

October 1: Clear, bright, and beautiful, with a light southeast breeze. Mr. Starke, who has been staying with Dr. Gambell, started for his proposed tour of prospecting in Golovin Bay. Party of five men went down to Unalaklik to inquire for expected news from St. Michael. Manufacture of pulkas is still going on, excavating and leveling the ground around the main building, packing and storing goods in the warehouse, also inclosing the lower story of the same for a cellar. At 8 a. m., 26° ; at noon, 30° ; at 8 p. m., 26° .

October 2: At 8 a. m., 26° ; at noon, 30° ; at 8 p. m., 28° . Clear, bright, and beautiful, with a strong, cold, southeast breeze. Mr. Dahl and party returned from Golovin Bay with favorable news from the placers. Observed the Sabbath, but indulged in a great deal of letter writing, as the last opportunity to send out mail will be to-morrow.

October 3: At 8 a. m., 28° ; at noon, 32° ; at 8 p. m., 30° . Clear, cold, and delightful, with southeast wind. Mr. Dahl, Dr. Gambell, O. Leinan, and three other men departed in the whaleboat for St. Michael with the mail.

October 4: At 8 a. m., 30° ; at noon, 40° ; at 8 p. m., 36° . Clear, dry, glorious weather, with a strong southeast wind. Just the right kind of a day for outdoor work and exercise. A road running along the front of all the buildings is being built.

October 5: Gloomy, overcast, and mild, with a light southeast wind. It has been two months to-day since the Stars and Stripes were nailed to the spruce tree, and in that short space of time the place has changed from a nearly impenetrable mass of brush and all kinds of rubbish to a very beautiful and respectable place—a fitting site for the required purposes. All this is due to the energy and foresight of the superintendent, Mr. William A. Kjellmann, and the obedience, faithfulness, and willingness that everybody has shown in performing his different duties. The work already completed is a credit to the entire colony. Dunnak and wife, with two pack deer, in from the herd after their rations. The herd is in favorable condition, with the exception of a few sick.

October 6: Partly overcast, with a strong southeaster. Building continuously going on.

October 7: Clear, bright, and delightful weather, with a light southeaster. Everybody is eagerly awaiting the return of Mr. Dahl and party with the expected mail from the States. Everyone enjoying excellent health, while contentment and happiness prevail.

October 8: Southwest wind and some rain. Overhauling and cleaning firearms. Assorting goods and putting up shelves in the warehouse done by two men, under the supervision of the superintendent.

October 9: A fine, mild, beautiful day, with a light southerly wind. Sabbath was observed. R. Dahl and party are anxiously expected hourly.

October 10: Clear, fine, glorious weather, with a light southerly breeze. Grouse are getting plentiful, and everybody is feasting on game. Dr. Gambell arrived almost three hours ahead of Mr. Dahl with the mail. Nearly everybody received some letters and news from relatives. Quite a large number of payments were made to the herders.

October 11: Gloomy and overcast, with a light southerly wind. Magnus Kjelsberg, Thoralf Kjelsberg, Basi, Tornensis, Barr, and Martin left for Golovin Bay. R. Dahl went down to Unalaklik. Two deer were brought in by Martin.

October 12: Calm, cloudy, with some rain, sleet, and snow flurries. Mr. Dahl is expected from Unalaklik with his baggage. The adults who are attending Dr. Gambell's night school are making fair progress in the English language. Three deer are now here at the station for certain experiments by the superintendent.

October 13: Calm, clear, beautiful weather. Dr. Gambell has, with the assistance of two men, put up a table and benches for the accommodation of the children who will attend the school in the daytime; adults are receiving lessons in the English language in the evening. Experiments with two deer and pack saddles were made by the superintendent.

October 14: Clear, fine, delightful weather, with a light gust of wind from the northwest. At last all the surrounding mountains are covered with snow that will be there for this season. A large party of natives are visiting us. With all the houses and the people who are busy around them, the station must present quite an interesting sight. A boat load of shingles arrived from the beach.

October 15: At 7 a. m., 19°; clear, calm, nice weather. R. Dahl arrived.

October 16: Clear, with a cold northwester; the Sabbath was kept.

October 17: At 7 a. m., 5°. Clear, beautiful weather, with a cold northwest breeze. Four natives from the Yukon took the mail.

October 18: Clear, dry, but cold refreshing weather. Creeks, ponds, and the river near its banks are now frozen. Superintendent was again experimenting with his new and improved pack saddles, which seem certain to be a success. Dr. Gambell's school for children begun.

October 19: At noon, 30°. Gloomy and overcast; very mild, light southeast wind, with some snow. R. Dahl celebrated his forty-ninth birthday.

October 20: At noon, 30°. Clear and mild, with a light southeaster. Quite a conflagration occurred at 2 p. m. through carelessness, in which a tent and considerable clothing of the occupants was consumed. In the future, the rules and regulations concerning fires in the newly built houses will be strictly enforced by the superintendent.

October 21: Cloudy, with a light easterly wind. The first overland mail from St. Michael to the States arrived at Unalaklik.

October 22: Gloomy and overcast; easterly wind. As Mr. Kjellmann's supervision is always in constant demand all around the colony, Mr. Dahl has since his arrival been occupied in copying and transferring accounts which are all in arrears. The main building is now nearing completion; with its carvings and decorations it is certainly the most elegant structure yet constructed in this part of Alaska. On account of its Gothic design one would imagine it had been imported from Europe. Dr. Gambell's pupils are making good progress in the English language. Golovin Bay party expected.

October 23: At 7 a. m., 5°. Clear, fine, lovely weather, with a strong southeaster. The overland mail is expected to take all our letters to-day. Superintendent and Mr. R. Dahl went down the river on the ice. Everybody observed the Sabbath, even in the absence of a spiritual adviser. The superintendent, notwithstanding the strong wind blowing down the river, made the distance (8 miles) from Unalaklik, where he and R. Dahl dined with Rev. Karlsen, in the short time of two hours; left R. Dahl gradually behind, who probably became exhausted and returned to Unalaklik to wait for fair wind.

October 24: A clear beautiful day, with a strong easterly breeze. The river is now frozen over in several places, some ice skates are

made and moonlight picnics are sure to be indulged in on some of these beautiful nights. Shingles are now being put on the main building; a rather cold occupation. We have now six comfortable cozy cabins of which five are occupied. It appears there is some difficulty in getting the person who is going to take out the mail to take the additional burden of our letters.

October 25: Clear, calm, and mild. Roofing the main building delayed for want of shingles. The girl "Inga" returned to the herd with the three deer that have been here.

October 26: Clear and mild, easterly wind. Rations were issued; three men with eight deer in after their rations.

October 27: Gloomy and overcast; a light easterly breeze. Two prospectors came down from their camp; on the way one had the misfortune to cut his hand; as Dr. Gambell was absent, Mr. R. Dahl dressed his wound; they are staying here for a couple of days.

October 28: At 7 a. m., 10°. Cloudy and chilly; southeast wind. Two natives with a dog team passing by with the mail took our letters also.

October 29: Clear and beautiful, a light breeze from the southeast. Mr. Kjellmann and R. Dahl went down to Unalaklik, the superintendent on ice skates and sail, but Dahl walked down. Several dog teams passed by going down the river. The ten men that were detailed to haul up shingles and other materials from Unalaklik returned with five loaded sleds.

October 30: At 7 a. m., 4°. Clear, fine, glorious weather; southeast wind. The usual observance of the Sabbath.

October 31: At 7 a. m., 5°. Clear with an easterly wind. Superintendent and R. Dahl returned from Unalaklik.

November 1: At 7 a. m., 10°. Clear and beautiful, with a cold, strong, and penetrating breeze from southeast. Doors and windows are now being put in the main building; a kind of a tinsmith's shop is in operation making chimneys and stacks. Frederick and Per arrived from Port Clarence via St. Michael.

November 2: At 7 a. m., 10°. Partly overcast, with a strong southeaster.

November 3: At 7 a. m., 12°. Clear and quite mild; during the day a light easterly breeze. Superintendent and Mr. Regnor Dahl took several days' provisions and packed them in two pulkas. Their departure was delayed as the deer did not arrive in the camp until three hours after their departure. The object of this tour is to select locations and erect temporary sod houses or winter shelters for the herders.

November 4: Clear, calm, and beautiful weather. A great deal of wood chopping was done. Everything is going on as usual with reference to starting and quitting hours, notwithstanding the absence of

the superintendent, which is a great credit to the honesty and diligence of all. Dr. Gambell went down to Unalaklik on ice skates.

November 5: At 7 a. m., 15° . Fair and quite calm. Several cases of sickness. Superintendent and R. Dahl returned; a barbecue expected, as they killed a caribou.

November 6: Clear, with the usual southeaster which almost always prevails. The Sabbath observed and a rest from the weekly routine taken. Dunnak, Tornensis, and two women came in with five deer and sleds.

November 7: At 7 a. m., -4° . Gloomy and miserable, with a very strong easterly breeze. It appears as if it is going to snow.

November 8: Overcast, with some snow. Two deer went astray; Frederick was sent to find them, and has done so.

November 9: Partly overcast, with calm, mild weather, some snow. Frederick returned to the camp with two frisky deer; a very fine sight to witness. What these noble animals can do in speed is phenomenal; no other beast of burden is under any circumstances to be compared with them in adaptability for this arctic land of vast distances.

November 10: At noon, 15° ; overcast, with some slight snow flurries.

November 11: At 7 a. m., -5° . Clear, calm, and beautiful. Several dog teams arrive with fish, which the natives exchange with the Lapps for groceries. Dr. Gambell received late in the evening a note from Mr. Engelstad, of Unalaklik, asking him to kindly come down and attend his children, who have an attack of the measles. The Doctor will start early in the morning on the dog sled which was sent up for him.

November 12: At 7 a. m., -12° . Clear and calm. One mess of 12 men moved up to the second story of the main building; one room to be used for a kitchen and the larger or middle room for a living and sleeping apartment. A large heating stove was put up.

November 13: Clear and calm. The Sabbath observed.

November 14: At 7 a. m., -14° . Clear and calm. The second overland mail from St. Michael passed by and took our letters. Mr. Hoxey, custom officer, was in charge, with two natives and dog teams; one of the natives changed his mind about going and turned back. Bunks were put up in the main building for the men who will occupy the middle room. R. Dahl appears to be very ill; he is unable to retain his food and has been ailing for some time.

November 15: Clear, with a very light easterly wind. The Rev. Mrs. Karlsen and Miss Johnson, the teacher, with Mr. Hoglein as an escort, visited the station. Several prospectors came down from the new placers on the Anvik River.

November 16: At 7 a. m., -5° . Gloomy and calm; snowing the entire day. Dr. Gambell's drugs were moved into the northeast room in the main building, which is to be used as a schoolroom and dispensary;

the room above will be the Doctor's living apartment. Everybody is now housed in good, warm, comfortable dwellings. A. Gaup and Johan Tornensis brought in the carcasses of eight deer that the superintendent had inspected and ordered slaughtered, as their diseases were incurable.

November 17: Partly overcast, with a strong easterly breeze. First school in the main building was commenced.

November 18: Partly overcast, with calm.

November 19: At 7 a. m., 5°; at noon, 20°. Clear, glorious weather; light southeast breeze. A code of rules and regulations regarding certain precautions in case of fires, to be strictly enforced and adhered to by all, has been drawn up by the superintendent and placed in a conspicuous place in every dwelling, together with the rules referring to morals and Sabbath keeping issued on August 1, 1894. Airing bedclothes and sleeping apartments and cleaning the same will be a part of Saturday programme in the future, whenever the weather permits. Whipsawing and wood chopping is continuously going on.

November 20: At noon, 15°. Clear, but quite a storm from the southeast late in the day. The Sabbath is being observed.

November 21: At 7 a. m., 10°. Clear, with a strong breeze from the southeast. Daily trips between the herd and the station are made with untrained deer by Frederick, Tornensis, and Gaup, who are breaking them into pulkas. Anders Klemetsen is suffering a great deal from rheumatism; he has been in bed for some time.

November 22: At 7 a. m., 10°. Clear, with strong easterly wind. A beautiful display of aurora borealis at night.

November 23: Gloomy and overcast, with a southeast gale, which later became a blizzard. Several natives from Nulato passed by. Rations were issued.

November 24: Partly overcast; everybody is observing the great national holiday. The party who went to Golovin Bay returned with eight deer in charge of Dr. Kittlesen.

November 25: Partly overcast, some snow. Great excitement prevails on account of the new find at Cape Nome. Mr. Melsing and Mr. Johnson stayed over night.

November 26: Clear, with southerly wind. Preparations being made for the contemplated trip to St. Michael. Dr. Kittlesen went down to Unalaklik.

November 27: Clear, nice weather. Keeping Sabbath.

November 28: Clear and bright. Superintendent William A. Kjellman and Dr. Kittlesen, with some ten or twelve others and thirty deer, started for St. Michael. A grand sight.

November 29: Clear, calm, cold, and beautiful.

November 30: Clear and fine weather. Mail from Nulato; nothing for the station. Reports that everybody on the Yukon had an attack of the mumps.

December 1: Gloomy and overcast. Mr. Spring arrived very much exhausted.

December 2: At 7 a. m.,—18°. Clear, calm, and glorious weather for outdoor exercise. Quite an independent spirit visible among most of the inhabitants.

December 3: At 7 a. m.,—25°. Clear, calm, and beautiful. Martin came for Dr. Gambell with two deer. The Doctor started immediately to attend Johan P. Rist, who had accidentally cut his leg. The superintendent returned from St. Michael.

December 4: At 7 a. m.,—27°. Clear, calm, and bright. Keeping the Sabbath.

December 5: At 7 a. m.,—10°. Clear and calm. Mail from St. Michael to the States in charge of United States Army stayed over a night to give everybody an opportunity to send letters. Some snow. Dr. Gambell will be acting superintendent during the absence of Mr. Kjellmann.

December 6: At 7 a. m., 0°. Clear and calm in the morning, cloudy in the afternoon, and snow in the evening. Preparations being made for a trip to Cape Nome. The corporal in charge of the mail of the United States Army continued his journey, starting bright and early in the morning.

December 7: At 7 a. m.,—10°. Very mild; still snowing, 3 inches having fallen by 8 a. m. Everybody is in a state of excitement as 46 deer are being lined up with loaded sleds and pulkas en route for Cape Nome. Superintendent Kjellmann, Mr. A. Spring, jr., and Mr. Alex. Jernes, accompanied by a sufficient number of herders, are off for an indefinite time. Mr. Kjellmann will continue his journey to Port Clarence, and intends to return some time in February.

December 8: At 7 a. m.,—9°. Light snow during the day, with northerly wind. The young men who had been sent out to hunt caribou returned without having seen any game at all. They reported snow to the depth of 1 foot on the mountains and more falling. Two deer had to be killed on account of injuries received; one having fallen and broken its leg, and the other was hurt by another deer.

December 9: At 7 a. m.,—11°. One man was sent with medicines to Unalaklik carrying also instructions from the doctor, as Nellie, one of the native girls at the mission, is sick. Light breezes from the north, with the sky overcast with clouds. Two more men were sent to the herd to care for the deer, which needed special attention.

December 10: Cold and cloudy; wind blowing strong from the north. The monthly mail passed through at 10.30; they picked up our mail and went on. Fifty-five dogs were in this train, the largest number of dogs that has passed the station at any one time this winter.

December 11: At 7 a. m., 17°. Wind blowing stronger than ever this morning; it is sweeping all the snow from the river. The mail

carriers that left yesterday will have a hard day's travel, as they will have to face the wind.

December 12: At 7 a. m., 21°. Cloudy and still. Rev. A. E. Karlsen, of Unalaklik, paid the station a visit and expressed his pleasure at seeing us all so comfortable. He returned later with the deer which had been brought from the Golovin Bay herd for his use at the mission.

December 13: At 7 a. m., 22°. Light wind blowing; clouds hang heavily and completely cover the blue sky; it gets light late and dark early. Later in the day sixteen unbroken deer were lassoed and fastened, which is customary before breaking them.

December 14: At 7 a. m., 25°. Warm and bright, almost thawing; the sun's rays are too oblique to make any impression. The superintendant's kitchen and dining room have been turned into a sled factory, and the men are busy making sleds and pulkas.

December 15: At 7 a. m., 25°. Wind blowing softly from the north. Three men with 12 unbroken deer start to St. Michael to return with provisions. Messrs. Ward and Chips, of the Gardner party, spent the night at the station.

December 16: At 7 a. m., 18°. Still warm and bright. The sun was seen for a few hours moving along the southern horizon in a clear sky. O. Paulsen and T. Kjelsberg, with seven deer and sleds, left for St. Michael for the purpose of conveying Dr. and Mrs. Gregory and Mr. and Mrs. Hatch to the home of Mr. and Mrs. Karlsen, at Unalaklik, that they might there enjoy their northern Christmas. Toward evening the wind increased, blowing quite strongly from the north.

December 17: At 7 a. m., 10°; at 9 a. m., 5°; at noon, 7°. Light northerly wind blowing; sky clear and sun shining. Martin came in from the herd and got some fox traps, saying that the fox tracks were thick around the herd and that he hoped to trap Mr. Reynard.

December 18: At 7 a. m., 6°; at 4 p. m., -15°. Clear and calm. Dr. Southward came down from his cabin up the river to remain at the station until Mr. Spring's return. Gardner's men are on the way to Port Gardner with all their provisions, finding no gold up the river. They will remain over night.

December 19: At 7 a. m., -11°; at 5 p. m., -20°. Clear, calm, and cold all day long.

December 20: At 7 a. m., -35°. Very bright and cold; light wind from the north.

December 21: At 7 a. m., -35°. Cold and cloudless.

December 22: At 7 a. m., -20°. Very still and cold all day long; toward evening the wind began blowing from the northeast. The sun was in sight to-day from the time it arose from behind the mountains until it disappeared in the southwest, being visible just two hours and fifty-four minutes. Mr. E. Engelstad made the station a visit.

December 23: At 7 a. m., -5° . It has been snowing and blowing from the northeast all day. The Laplanders who went to St. Michael for provisions returned to-day.

December 24: At 7 a. m., 5° . Cloudy, with wind from the northeast; light snow in the evening. The two men who went to St. Michael for the visitors returned, bringing with them Mr. and Mrs. Hatch; Dr. and Mrs. Gregory thought it too cold to risk such a long journey, so did not come. They arrived in Unalaklik late the evening of the 23d, having made the journey in safety. Klemet Nilsen, who has been sick for seven weeks, died at 5 p. m. Corporal Helms, who passed through here the 5th instant on his way to Nulato, returning to St. Michael, reached the station late this evening and will remain until morning. He reports that there is plenty of snow on the divide for good sleighing. He also reported that a vein of bituminous coal 3 feet thick had been found near the Yukon above Nulato.

December 25: At 7 a. m., 9° . Light wind blowing from the northeast; snowed some during the night and in the early morning. Christmas passed as a day not unlike other days.

December 26: At 7 a. m., -3° . Calm, cloudy day; very light wind from the northeast. The sun shone for a little while to-day, and as there was very little wind it was an enjoyable day. Several of the boys and girls walked to Unalaklik to attend the school exercises conducted by the teacher, Miss Johnson.

December 27: At 7 a. m., -17° . Cloudy, with no sun; became warmer during the day. The boys of the station mounted a Christmas tree for the children, and in the afternoon Miss Johnson and Miss Omegitchake of the mission came up and trimmed it, deer having been sent down to bring them up. In the evening all the people of the station gathered in the lower rooms of the superintendent's house and were entertained by a short programme and views from the magic lantern, which Miss Johnson was kind enough to bring along. This was the first time the people had been gathered together since reaching Alaska, and the little entertainment seemed to please them very much.

December 28: At 7 a. m., -19° ; at noon, -10° ; at 4 p. m., -30° . Clear, cold, and calm; no wind blowing at all. Mr. and Mrs. Hatch of St. Michael, Rev. and Mrs. Karlsen of Unalaklik, Mr. Brynteson, and Mr. Hoglein came up to visit the station, arriving at 3 o'clock, and not suffering from the cold. The herd of reindeer was driven from the camp to the station for the inspection of the visitors. The deer presented a pretty sight, and they were admired not only by those who had for the first time seen a herd of the deer, but by all.

December 29: At 7 a. m., -20° . Strong wind blowing from the northeast. All the visitors returned to Unalaklik with the exception of Mr. and Mrs. Hatch, who will remain over until tomorrow.

December 30: At 7 a. m., -5° . Wind continues to blow from the

same direction; few clouds during the day. Mr. and Mrs. Hatch said good-by, and with three fleet deer and Alfred for their driver were soon down the river on their way to Unalaklik.

December 31: At 7 a. m., 0°. Cloudy but no wind blowing.

January 1, 1899: At 7 a. m., 10°. Wind began blowing from the east during the night and has continued the whole day long. Cloudy in the morning but cleared up during the day. Rev. A. E. Karlsen of the Swedish mission at Unalaklik kindly came up and held services for the people of the station.

January 2: At 7 a. m., 4°. Clear; wind blowing from the northeast. Word came that Mr. Kjellmann and party had reached the other side of Golovin Bay. While at Golovin Mr. Kjellmann had been sick, but was better and had continued on his journey in a few days. Deer to go to St. Michael were brought in from the herd this evening.

January 3: At 7 a. m., 4°. Clear, with light wind from the east. Eight men with 27 deer started for St. Michael; Mr. and Mrs. Hatch will return with them. Upon their return trip they will load their sleds with the station's provisions, which are stored there. A daughter was born to Mr. and Mrs. Johan Tornensis.

January 4: At 7 a. m., 5°. Easterly wind; sky overcast with clouds. Invoicing the Government goods is in progress. The herd is reported in good condition.

January 5: At 7 a. m., 10°. It began snowing yesterday evening and a little has fallen during the night; easterly wind blowing. One of the Norwegians returned after having gone about halfway to St. Michael; he was lamed by the travel.

January 6: At 7 a. m., 12°. No wind, but cloudy; the trees are frosted all over and everything looks nice and clean.

January 7: At 7 a. m., 4°. Light wind blowing from the east; clear. The distance from Eaton to Unalaklik was measured and found to be $7\frac{3}{4}$ miles, shortest route that could be taken on foot, making three portages on the way. Mail left for the States. A letter was received from Mr. Kjellmann dated December 31, 1898, from an Eskimo village 12 miles on the other side of Golovin Bay, saying that he was in bed in a native house in the village and had been sick for eleven days. From the symptoms he mentioned it was judged that he was suffering from either cholelithiasis or intestinal obstruction. He requested that Dr. Southward, who has been stopping at the station, be supplied with suitable drugs and requested to go and see him in his sickness. All haste is being made to start the doctor to-morrow.

January 8: At 7 a. m., 4°. Clear, with a northeast wind springing up at 4 o'clock, and blowing quite hard later. Dr. Southward, accompanied by one Laplander, started on his journey well protected by furs.

January 9: At 7 a. m., 10°. Easterly wind blowing; clear and bright all day.

January 10: At 7 a. m., 0° . Clear, with light wind from the east.

January 11: At 7 a. m., -27° . No wind; clear. Mr. Hendricks, of Weare, stopped at the station en route for St. Michael, where he expects to meet his sister and two children, and take them over the divide on dog sleds, and leave them at Nulato. Mr. Hendricks also came to see about the removal of Rev. Prevost's herd of deer from Golovin Bay to the Yukon.

January 12: At 7 a. m., -24° . Clear and cold all day, with very light wind from the west. Part of the men who went to St. Michael on the 3d instant returned. They reported that it took them but two days to make the trip to St. Michael and that Mr. and Mrs. Hatch had suffered no inconvenience, but had had a pleasant trip. Isak Nikkola, while out hunting, fell, throwing the gun over his shoulder; it struck the frozen ground and discharged the load of No. 3 shot which passed through the olecranal process of the ulna of the right arm, also all of the fleshy part of the elbow, and part of the internal and external condyles of the humerus; 24 of the shot then lodged in the anterior part of the thigh of the left leg. The wounds were dressed by Dr. Campbell, Dr. Kittlesen assisting in the operation. Word was received to-day that Mr. Kjellmann was much better.

January 13: At 7 a. m., -35° ; at 11 p. m., -30° . Clear and still all day. The freighters returned from St. Michael in the afternoon. Martin brought from the camp the forward prong of one of the antlers of a sled deer. Through the flattened part of the prong, and about seven inches from the head of the animal, was a bullet hole, apparently made by a shot from a 40-caliber rifle. No one can account for it in any other way than that someone was trying to get fresh deer meat. Still the herders have heard no firing in the vicinity of the herd.

January 14: At 7 a. m., -30° . Light breeze from the east; cloudy all day long, with a few flakes of snow.

January 15: At 7 a. m., -17° . No wind; cloudy all day.

January 16: At 7 a. m., -10° . Cloudy, with a light breeze from the west. Two Laplanders with deer left for St. Michael for provisions to-day. More miners are coming down the river, hauling their provisions on sleds, en route for Cape Nome. As only the man with the October mail has returned, we are expecting the November and December mail carriers back every day. There are fond expectations of getting letters from the States when they do come.

January 17: At 7 a. m., -12° ; at noon, -15° . Wind blowing, with fine snow from the southwest, cloudy all day. Magnus Kjelsburg started for Golovin Bay to get the deer belonging to Mr. Prevost and Moses, the native. Dr. Kittlesen, who has been stopping here a few days, left for Unalaklik at noon.

January 18: At 7 a. m., -22° . Cloudy, with fine snow and wind from the southwest. One deer which had been with the party going

to St. Michael returned with the halter straps dragging. Gangrene was discovered this morning in the wound of the man who shot himself.

January 19: At 7 a. m., -20° . Cloudy until evening; wind north-east; light snow during the night. A letter was dispatched to Dr. Kittlesen requesting him to remain a few days longer, that he might assist in the removal of the necrosed tissue from the wounded man's arm, should it be necessary. The letter failed to reach him before he had started for Cape Nome.

January 20: At 7 a. m., -25° . Clear; wind shifted to the west during the night; it became warmer later in the day.

January 21: At 7 a. m., -10° . Wind blowing from the west; few clouds during the day.

January 22: At 7 a. m., -21° . Wind east; clear. Two men from Port Gardner came up last evening and remained until this morning.

January 23: A. m., -30° . East wind; clear. Mr. Hendricks returned from St. Michael en route to Nulato with his sister, Mrs. Pifer, and her two children. They took dinner at the station and will stop at the Eskimo village to-night.

January 24: A. m., -21° . East wind; cloudy this morning.

January 25: A. m., -15° . Strong wind all day; cloudy, with some snow in the evening. The deer returned from St. Michael with provisions for the North American Transportation and Trading Company, which will be freighted up to Cape Nome. Mr. Widstead came from St. Michael with the Laplanders. The first case of mumps appeared this evening. Anders Balto has the scurvy. Potatoes were secured from Unalaklik from Rev. Karlsen. He gave from his scanty supply, although he has many people to feed.

January 26: A. m., 0° . East wind and cloudy.

January 27: A. m., 4° . Blizzard raging from the east. Comparatively nothing done at the station.

January 28: A. m., 2° . Wind still blowing from the east; cloudless. Wind became stronger in the afternoon, and it is blowing a gale this evening. The miners who have been hauling their goods down the river went to Unalaklik with their last load.

January 29: A. m., 20° . East wind; cloudy all day. Mail came from Cape Nome and Kotzebue Sound. Mr. Kjellmann recovered from his sickness and reached Nome City before the doctor arrived. Mr. Hester, who carried the letters, stated that they were all at work building houses, and would probably return to the station some time in March. We also heard, for the first time, that on the 26th instant the Government mail passed this station, ignoring the Government office here. This was quite a disappointment, as there was important official mail waiting to be taken to Captain Walker at St. Michael.

January 30: A. m., 20° . Warm all day, but not thawing; east wind. Twenty-six deer with 21 sleds and pulkas left for Nome City at noon.

Mikkel, with two other Laplanders, were in charge of the deer. Mr. Widstead, who has been at the station since coming from St. Michael, accompanied them.

January 31: A. m., 20°. East wind. C. J. Ward and E. Gardner came up from Port Gardner and returned during the day. The Laplander who went to Cape Nome with Dr. Southward returned, as did one of the men who went up in December. More news from Mr. Kjellmann and party. All are doing well.

February 1: A. m., 18°. East wind, with snow falling fast. Fitzhugh Henderson arrived at the station and is visiting the physician.

February 2: A. m., 27°. Northeast wind. Six inches of snow fell during yesterday and last night. Snowing all day without stopping. Upon examination it was found that the parties suffering from scurvy had refused to eat the evaporated potatoes which had been given them on their ration days; their complaint was that they did not like them.

February 3: A. m., 25°. Snow and sleet coming from the northeast during the forenoon; strong wind blew all night; wind stopped blowing at 6 p. m.

February 4: A. m., 22°; at noon, 30°. Bright, sunny day; no wind. The sun's rays on the south side of the house were not vertical enough to cause the snow to melt. Since the snow skees have come into use, children as well as men are using them. Mr. Henderson left for St. Michael, carrying a letter of importance to Capt. E. S. Walker. His trip is made on foot, and was hastened on account of the urgency of the letter.

February 5: A. m., 20°; at noon, 28°. Cloudless, with an increasing east wind. A messenger was sent to Port Gardner this morning for medicines, which the station is wanting. A severe case of meningitis resulting from mumps is affecting one of the men of the station. David arrived with the mail from the States and Yukon; he will remain over night and continue his journey in the morning.

February 6: A. m., 19°. Strong east wind all night, lasting until 10 a. m. Three Laplanders with deer were sent to Fort St. Michael for the purpose of conveying soldiers from that place to Golovin Bay. Orders to that effect have been received from the commanding officer, Capt. E. S. Walker, of Fort St. Michael.

February 7: A. m., 13°. Cloudy in the forenoon; strong southeast wind blowing all day. One man with reindeer was sent up the river to Dr. Southward's cabin to bring down his surgical instruments and medicines.

February 8: A. m., 10°. Cloudy; strong east wind; snowed part of the day. Deer from the herd were brought in to haul moss to the station. The man returned from the cabin with the instruments. Two more men returned from Cape Nome this evening.

February 9: A. m., 5°; p. m., 4°. Few clouds during the afternoon; strong east wind.

February 10: A. m., -1° . Cloudy all day; strong southeast wind. One Eskimo sled came up against the wind, the first one seen for several days; the wind and drifted snow makes traveling almost out of the question.

February 11: A. m., -8° . Cloudless; wind during the night, which fell until there has been but a slight breeze blowing from the east all day.

February 12: At 7 a. m., -28° . Clear and still; no wind. Mr. Henderson returned from St. Michael, bringing communications from Captain Walker, the agent of the North American Transportation and Trading Company, and the agent of the Alaska Commercial Company. Both of the companies were anxious to employ more of the reindeer in freighting goods.

February 13: At 7 a. m., -34° . No wind and cloudless.

February 14: At 7 a. m., -25° . Light wind from the northeast; clear most of the day.

February 15: At 7 a. m., -31° . No wind blowing; few clouds. One man returned from Cape Nome with a letter from Mr. Kjellmann, in which he states that they intend to start back the latter part of the present month.

February 16: At 7 a. m., -31° . No wind blowing; few clouds.

February 17: At 7 a. m., -40° . No wind blowing; day clear.

February 18: At 7 a. m., -25° . Light wind from the northwest; cloudless.

February 19: A. m., -15° . Light wind from the northwest; some snow fell during the forenoon. A communication was received from Lieutenant Spaulding, stating that on account of Captain Walker's sickness he would not come with the soldiers until on or about the 24th instant.

February 20: A. m., -19° . Clear day, with a northeast wind blowing. Three miners en route for Cape Nome stopped at the station this evening and will remain over night; they bring word that Dawson is burned down.

February 21: A. m., -10° . Cloudy, with moderately strong wind from the northeast.

February 22: A. m., -10° . Clear, with westerly wind. David returned from Nulato with the mail. Nothing received from the outside yet. Mail from Kotzebue district brought down and delivered to the postmaster.

February 23: A. m., -32° ; at noon, -10° . Clear and beautiful day, with southeast wind.

February 24: At 7 a. m., -34° . Bright and clear, with no wind.

February 25: At 7 a. m., -36° . Clear, with light wind from the east. Lieutenant Spaulding, with the soldiers, arrived at the station at 11.20 p. m.

February 26: At 7 a. m., -36° . Few clouds, with no wind. Two couples from the station were united in marriage at the mission in Unalaklik to-day. Lieutenant Spaulding visited the mission, and returned in the evening to the station.

February 27: At 7 a. m., -35° . Clear, with no wind. Two soldiers with a dog team left for Nulato at 11 a. m.

February 28: At 7 a. m., -38° . Clear, with light wind from the northwest. The remaining soldiers, with Lieutenant Spaulding, left the station with deer this morning at 9.30; they were accompanied by three drivers, and started for the mining district in the vicinity of Golovin Bay. A messenger was sent to Port Gardner for medicine for the scorbutic patients.

March 1: A. m., -35° . Clear day, with light westerly winds.

March 2: At 7 a. m., -32° . Clear, with southwest wind. One of the herders came in to get an extra tent to put around the one they are already in, as the one now in use is getting old and thin.

March 3: A. m., -25° . Cloudy, with easterly winds.

March 4: At 7 a. m., -16° . Strong easterly wind; clear.

March 5: At 7 a. m., 1° . Wind still from the east, but not so strong; clear. Two Lapp women drove to Unalaklik this forenoon.

March 6: A. m., -8° . Beautiful, sunshiny day, with but a light breeze from the east. The river in front of the station is overflowing.

March 7: At 7 a. m., -5° . Light wind from the northeast; bright and clear. Mikkel Nakkila returned from Cape Nome, having been thirty-seven days from the station. He brought word from Mr. Kjellmann that he would in all probability be home in a week.

March 8: At 7 a. m., -16° . Wind still from the northeast and stronger than yesterday; clear, cloudless day. Three drivers, with 13 pulkas, 5 sleds, and 20 deer, left for St. Michael for provisions from the Government supply.

March 9: At 7 a. m., -5° . Northeast wind; clear day. Mail passed the station to-day. Seven men were sent up the river 6 miles to saw boat lumber.

March 10: A. m., -3° . Clear day, with east wind. Two men returned from Golovin Bay.

March 11: At 7 a. m., -25° . Few clouds, with a southeast wind. At noon in the sun, 26° .

March 12: At 7 a. m., -6° . Cloudy, with a chilly east wind blowing all day. The water ran over the ice again in the river.

March 13: A. m., 14° . Strong northeast wind, with snow all day. Mr. Howe, who went up with the mail the 15th of November, returned, bringing Yukon mail only. Sergeant Dawson and Private Lester returned and will continue on their way to Unalaklik. Six miners, en route for Cape Nome, arrived at the station to-day. All of them come from the Yukon, part of them coming 275 miles. They report that we can expect the mail from the States in about a month.

It has been delayed at Circle City to be dried, as the carriers went through the ice.

March 14: At 7 a. m., 24° ; at noon, 39° . Wind still in the northeast; snowed all night and still snowing this morning; cloudy most of the day. Frederick arrived from Port Clarence at 9.30 p. m.

March 15: At 7 a. m., 38° ; at noon, 44° . Northeast wind, cloudy in the morning. Mr. Kjellmann and Mr. Spring returned from Anvil City; also part of the men who went up with them.

March 16: At 7 a. m., 35° ; at noon, 39° . Cloudy, with light breeze from the west. General settling of accounts, Acting Superintendent Dr. Gambell and the storekeeper reporting to Superintendent Kjellmann. Balance of the Cape Nome party arrived at noon, followed in a short time by the men from St. Michael, bringing provisions. The superintendent issued orders that no more provisions were to be sold. Three more parties of gold hunters arrived from the Yukon. One of these men being sick, he was accommodated with a bed and attended to by Mr. Gambell, the station physician.

March 17: At 10 a. m., 38° ; at 6 p. m., 36° . St. Patrick's day, but no green could be seen. Snow part of the day. Everything is wet, making it difficult to get around. The superintendent has been writing all day, making up accounts. The sick prospector is being attended to by the station physician, who diagnoses his case as pneumonia and expects a change in his patient's condition in about five days. Wood chopping going on. A native dog team from up the river called.

March 18: At 7 a. m., 28° ; at noon, 40° ; at 6 p. m., 31° . The superintendent is regarded as an authority on Cape Nome news, and miners are calling every day to interview him. No change in the sick man's condition. An Indian dog team called and some trading was done. This has been a rather clear day, some improvement over the past few days.

March 19: At 7 a. m., 31° ; at noon, 36° ; at 6 p. m., 33° . A clear, fine day. A necessary operation was performed on Peder Berg by Dr. Gambell, the station physician, assisted by the superintendent and others; a loose piece of cartilage was removed from Berg's left knee; the operation was successful. The Sabbath was observed.

March 20: At 7 a. m., 33° ; at noon, 38° ; at 6 p. m., 34° . A cloudy day with heavy snow toward night. The superintendent has been stirring things up generally, sending six men up to the Indian village and four others a short way up the river to whipsaw boat lumber; all the scurvy patients are out—work being the superintendent's remedy for that disease. The sick men are doing nicely.

March 21: At 7 a. m., 32° ; at noon, 40° ; at 6 p. m., 36° . Snow most of the day. Sick men about the same. The superintendent has been writing all day on accounts and is making fine headway. Some natives here on their way down to hunt seal, others to trade.

March 22: At 7 a. m., 32° ; at noon, 44° ; at 6 p. m., 28° . A lovely day. Frederick arrived in the afternoon from St. Michael. The sick men are doing well. Two Laplanders with deer left for Shatolik to investigate for a summer pasturage.

March 23: At 7 a. m., 18° ; at noon, 32° ; at 6 p. m., 29° . Cloudy, calm, with snow and southwest wind at night. Frederick and Karl Suhr started for Nome City in the morning.

March 24: At 7 a. m., 32° ; at noon, 40° ; at 6 p. m., 34° . Cloudy, with some snow all day. Mr. A. Spring, jr., of New York City, went up the river to visit his cabin and drive camp robbers away. Mrs. Anders Balto, one of the Lapp women, gave birth to a baby girl at 8 p. m.

March 25: At 7 a. m., 30° ; at noon, 48° ; at 6 p. m., 35° . Fine, clear, calm, sunny, and pleasant day. Mr. Spring returned from up the river. Mr. Larimore here.

March 26: At 7 a. m., 32° ; at noon, 40° ; at 6 p. m., 28° . Bad weather for Easter Sunday; a stiff gale, with heavy snow, most of the day. The Sabbath observed.

March 27: At 7 a. m., 21° ; at noon, 33° ; at 6 p. m., 25° . Clear, sunshiny day; fog at night. Four Yukon Indian teams passed up the river on their way to Nulato. The sick prospector is gaining in health daily and Peder Berg is able to get around a little with the use of crutches. Mr. Larimore started for Unalaklik with Mr. Calkins in the morning.

March 28: At 7 a. m., 16° ; at noon, 28° ; at 6 p. m., 26° . Clear, sunshiny day; very warm in the sun. A good deal of target shooting in the afternoon. The sick prospector's partner is getting ready to start for that northern metropolis, Nome City.

March 29: At 7 a. m., 13° ; at noon, 28° ; at 6 p. m., 18° . Windy and cloudy. The sick man's partner started for the present Mecca of gold seekers. Mrs. Johansen gave birth to a baby girl at 10 a. m. Some natives from up the river were down and did some trading.

March 30: At 7 a. m., 18° ; at noon, 28° ; at 6 p. m., 26° . Very windy, with considerable sleet all day. The superintendent has been making some ivory souvenirs out of a walrus tusk and now sports a very handsome ivory toothpick, while two ivory paper weights adorned with strange devices grace the official desk.

March 31: At 7 a. m., 32° ; at noon, 38° ; at 6 p. m., 36° . Cloudy in the morning, with heavy snow in the afternoon. A big party of prospectors called, on their way down the river; two stayed all night. Some of the party came from Rampart City and some from Nulato. Reports have come in of claim-jumping at Nome City, and it seems that there have been arrests and many trials in that winter resort.

April 1: At 7 a. m., 28° ; at 6 p. m., 24° . Heavy snow all day. The superintendent and Mr. Spring drove down to Unalaklik with deer; they returned at 6 p. m., after taking an inventory of the station's

goods stored there. Some more prospectors passed down the river. News from Nome City that a Frenchman has been frozen to death there.

April 2: At 7 a. m., 30°; at noon, 38°; at 6 p. m., 32°. A clear, fine day. Some natives called with the carcasses of two caribou they had killed. The Sabbath observed.

April 3: At 7 a. m., 24°; at noon, 28°; at 6 p. m., 26°. Cloudy and gloomy all day. The superintendent is very busy getting 57 sled loads ready to start for Nome City. Mr. Brynteson called; also some Eskimos. A Lapp and two deer went up to Mr. Spring's cabin to haul down some of his goods. Martin, a former apprentice, sold two deer to the station for \$80.

April 4: At 7 a. m., 18°; at noon, 32°; at 6 p. m., 33°. Clear and sunshiny all day. Mr. Hester called on his way to Unalaklik. Dr. Gamble went to Unalaklik and returned at night.

April 5: At 7 a. m., 21°; at noon, 44°; at 6 p. m., 40°. Clear and warm, with bright sunshine most of the day. Several natives with dog teams called. The superintendent is very busy getting the train ready to start for Nome City.

April 6: At 7 a. m., 21°; at noon, 30°; at 6 p. m., 27°. Cloudy and gloomy all day; rather chilly and a dead calm. The superintendent very busy with the Nome City train; 19 sleds and pulkas are all ready to start. Mr. Hester, with his wonderful dog "Bob," arrived at 4 p. m. and stayed all night. The soldiers, with two prisoners from Anvil City, arrived at Unalaklik, the men and deer who brought them coming on to the station, where they arrived at 6 p. m.

April 7: At 7 a. m., 32°; at noon, 44°; at 6 p. m., 33°. Clear and calm. The superintendent drove to Unalaklik to attend to some business connected with the soldiers there; he returned at 4.30 p. m., coming up in 55 minutes. A good many of the boys are busy with preparations for starting for the land of gold; some leave to-morrow. News came in that the body of an Eskimo from Unalaklik had been found up the river, supposedly killed by accident, as his gun was entangled in his snowshoe.

April 8: At 7 a. m., 30°; at noon, 40°; at 6 p. m., 35°. Clear and calm. Forty sled loads, 44 deer and 6 men, and 3 other men pulling their own sleds, started for Nome City. Three dog teams passed.

April 9: At 7 a. m., 28°; at noon, 36°; at 6 p. m., 32°. Clear and sunshiny. Six of the men who have resigned started out to seek their fortunes. Some natives with dog teams passed. The Sabbath observed.

April 10: At 7 a. m., 8°; at noon, 32°; at 6 p. m., 28°. Clear and fine all day. Twenty-two sled and pulka loads started for Nome City and St. Michael; those going to the latter place to take down the soldiers and haul up bacon, etc. Mr. Kjellmann getting ready to go to St. Michael to-morrow.

April 11: At 7 a. m., 25° ; at noon, 28° ; at 6 p. m., 24° . Cloudy most of the day; snow early in the morning. Mr. Kjellmann left for St. Michael at 9 a. m. Dr. Gambell drove to Unalaklik and returned at 6 p. m. with Mr. Larimore.

April 12: At 7 a. m., 18° ; at noon, 28° ; at 6 p. m., 24° . Heavy snow in the afternoon. A lot of prospectors going down the river; four of them stayed all night. Considerable trading done with natives going up.

April 13: At 7 a. m., 13° ; at noon, 26° ; at 6 p. m., 22° . Snow all day. Trading with natives from Unalaklik.

April 14: At 7 a. m., 16° ; at noon, 24° ; at 6 p. m., 20° . Cloudy in the morning; clear in the afternoon. Four of the boys who started for Nome City returned to wait for better weather. Dr. G. called at Unalaklik.

April 15: At 7 a. m., 8° ; at noon, 18° ; at 6 p. m., 5° . Clear and sunshiny all day. The boys who came back last night started off again. Dr. G. came up and reported Mr. Karlsen seriously ill with hernia. The Doctor returned to Unalaklik in the afternoon. Two natives from Koyok, Norton Bay, were here, P. Berg going to Unalaklik with them.

April 16: At 7 a. m., 10° ; at noon, 20° ; at 6 p. m., 8° . Clear and sunshiny all day. Three Yukon miners stopped on their way to Nome City. As they were short of provisions and in a hurry to move on, a small quantity of provisions was sold to them from the store. Mr. Hester called in the afternoon and will stay all night. Mr. Larimore left for Unalaklik at 4 p. m. The Sabbath observed.

April 17: At 7 a. m., 6° ; at noon, 20° ; at 6 p. m., 6° . Clear and sunshiny. Mr. Hester left for Nome City. Dr. G. returned from Unalaklik and reported that an operation had been performed on Mr. Karlsen. A lot of miners from the Yukon are staying all night.

April 18: At 7 a. m., 3° ; at noon, 22° ; at 6 p. m., 8° . Clear and sunshiny all day. A large number of dog sleds were around at about noon. A white woman passed through, bound for Nome City; she is the first white woman who has come down from the Yukon this winter. Two miners stayed all night. The miners have purchased a large quantity of provisions from the superintendent's private stock. A note received from Mr. Kjellmann saying he will be back Friday; he has been detained by business.

April 19: At 7 a. m., 0° ; at noon, 20° ; at 6 p. m., 15° . Clear and sunshiny all day. Alfred Hermansen started at 10 o'clock last night with three deer to bring down a sick prospector from up the river. It has been reported here that this prospector has been lying in a tent alone and sick for some time; it is supposed he is suffering from dysentery. Dr. Gambell went to Unalaklik in the morning and returned at night. Dr. Larimore came up in the afternoon.

April 20: At 7 a. m., 1° ; at noon, 20° ; at 6 p. m., 16° . Clear and sunshiny all day. Dr. G. went to Unalaklik to attend to Mr. Karlsen. Two traders and one other man from Nulato passed through in the morning. Some natives from Unalaklik were here in the afternoon. Mr. Larimore left for Anvil City at 4 p. m. Alfred returned without the sick man.

April 21: At 7 a. m., 34° ; at noon, 44° ; at 6 p. m., 38° . Rather cloudy all day. Some natives here. The natives are laying in a stock of drilling for their summer tents. Dr. Gambell came up from Unalaklik at 5 p. m.

April 22: At 7 a. m., 40° ; at noon, 46° ; at 6 p. m., 42° . Rain most of the day. Dr. Gambell left for Unalaklik at about 10 a. m.; he reports that Mr. Karlsen is getting along nicely. Some natives from up the river here.

April 23: At 7 a. m., 40° ; at noon, 44° ; at 6 p. m., 40° . Cloudy and windy all day. Mr. Kjellmann returned from St. Michael at 4 p. m. The Sabbath observed.

April 24: At 7 a. m., 40° ; at noon, 44° ; at 6 p. m., 38° . Clear most of the day, with a few snow flurries. A new apprentice was taken for six months on trial. He has the euphonious name "Nellagoroak." Several natives here.

April 25: At 7 a. m., 40° ; at noon, 57° ; at 6 p. m., 46° . Clear and fine all day. Mikkell and wife started for Nome City. Three men with twelve deer were sent up the river to haul down boat lumber. It has been very warm to-day.

April 26: At 7 a. m., 38° ; at noon, 42° ; at 6 p. m., 36° . Cloudy in the morning; heavy snow at intervals in afternoon; very heavy snow at night. Dr. Gambell and Mr. Calkins came up from Unalaklik in the afternoon; they are going on a hunting trip.

April 27: At 7 a. m., 30° ; at noon, 36° ; at 6 p. m., 28° . Heavy snow until 3 p. m., then a slight clearing up, with colder weather. The men and deer who went up the river after boat lumber returned with heavy loads.

April 28: At 7 a. m., 22° ; at noon, 26° ; at 6 p. m., 24° . Cloudy all day. Dr. Gambell and Mr. Calkins with three deer left for their hunting trip. The new apprentice was sent out to the herd. Word was brought down by two natives that the white man who had been sick and alone in a tent is dead. Three prospectors called.

April 29: At 7 a. m., 28° ; at noon, 35° ; at 6 p. m., 32° . Cloudy all day; some snow in the afternoon. Two natives called. Dr. Gambell and Mr. Calkins returned, as they were stopped by water in the North River.

April 30: At 7 a. m., 33° ; at noon, 45° ; at 6 p. m., 36° . Clear and warm. Mr. Calkins left for Unalaklik. The Sabbath observed.

May 1: At 7 a. m., 31° ; at noon, 45° ; at 6 p. m., 35° . Clear, fine

day. A gang of men started work on a warehouse that is to be taken down to the beach. Dr. Gambell left for Unalaklik. Two natives from Nulato here.

May 2: At 7 a. m., 33° ; at noon, 50° ; at 6 p. m., 38° . Clear, fine day. Work continued on the warehouse. Dr. Gambell came up from Unalaklik in the afternoon; he has started a hotbed on the hillside for raising radishes and lettuce.

May 3: At 7 a. m., 30° ; at noon, 28° ; at 6 p. m., 28° . Clear most of the day; windy; a light snowstorm, with the sun shining, in the evening. Work going on as usual. Alfred got back from the herd.

May 4: At 7 a. m., 15° ; at noon, 20° ; at 6 p. m., 18° . Clear, fine day. Mr. Peckhard and friend with one native arrived this morning en route from Arctic City, on the Koyokuk River, to St. Michael; they remain all night.

May 5: At 7 a. m., 25° ; at noon, 45° ; at 6 p. m., 30° . Clear, fine day. Mr. Peckhard left for St. Michael. Two miners from Kotzebue Sound here; they left for Nome City in the evening. Dr. Gambell and a Lapp with four deer started at 10 p. m. to bring down the body of the man who died. Eight deer taken up to haul lumber.

May 6: At 7 a. m., 35° ; at noon, 50° ; at 6 p. m., 37° . Clear and fine most of the day, with a little snow in the afternoon. Some drunken natives stopped here.

May 7: At 7 a. m., 30° ; at noon, 42° ; at 6 p. m., 28° . Clear, fine day. One Lapp and four deer went to the herd in the morning. The Sabbath was observed.

May 8: At 7 a. m., 27° ; at noon, 28° ; at 6 p. m., 24° . A native here from Unalaklik; he offered 15 cents for a dinner, having evidently mistaken the station for one of "Dennett's" restaurants.

May 9: At 7 a. m., 30° ; at noon, 28° ; at 6 p. m., 33° . Cloudy all day. Started issuing two months' rations to all, preparatory to closing up the year's accounts. Miss Johnson, of Unalaklik, called.

May 10: At 7 a. m., 34° ; at noon, 42° ; at 6 p. m., 37° . Cloudy all day. Finished issuing rations. Dr. Gambell came up from Unalaklik and started out hunting at 6 p. m.

May 11: At 7 a. m., 34° ; at noon, 45° ; at 6 p. m., 38° . Cloudy all day; mist at night. Two men with four deer went to Unalaklik at 7 p. m.

May 12: At 7 a. m., 35° ; at noon, 43° ; at 6 p. m., 40° . Partly clear. Work finished on the warehouse. One man hewing boards.

May 13: At 7 a. m., 37° ; at noon, 41° ; at 6 p. m., 42° . Cloudy, with a strong southwester. The river is rising.

May 14: At 7 a. m., 45° ; at noon, 45° ; at 6 p. m., 42° . Cloudy all day, a little rain in the afternoon. The Sabbath observed.

May 15: At 7 a. m., 42° ; at noon, 45° ; at 6 p. m., 37° . Cloudy; rain and snow all day. The river has commenced to break up, and has risen about 2 feet in eighteen hours.

May 16: At 7 a. m., 45° ; at noon, 55° ; at 6 p. m., 50° . Cloudy most of the day. Dr. Gambell went out shooting and brought in two geese. The river rose about $1\frac{1}{2}$ feet.

May 17: At 7 a. m., 47° ; at noon, 40° ; at 6 p. m., 36° . Cloudy and rainy all day. Dr. Gambell went out shooting again, but was unable to get near the geese on account of high water. Rise in the river about $1\frac{1}{2}$ feet.

May 18: At 7 a. m., 46° ; at noon, 54° ; at 6 p. m., 35° . Clear, bright, sunshiny day until 6 p. m., when a cold fog blew up the valley. The river rose about 2 feet, and overflows the bank. There is a big ice jam in the bend below.

May 19: At 7 a. m., 50° ; at noon, 62° ; at 6 p. m., 60° . Clear all day. The river fell about 6 inches. Two men are whipsawing boat lumber.

May 20: At 7 a. m., 52° ; at noon, 72° ; at 6 p. m., 60° . Clear all day. The river rose 4 feet and then fell about 2 feet. The first robin redbreasts were seen and heard this afternoon.

May 21: 7 a. m., 51° ; noon, 60° ; 6 p. m., 50° . Clear. The river fell about 1 foot, leaving large cakes of ice on the banks. Sabbath observed.

May 22: 7 a. m., 50° ; noon, 55° ; 6 p. m., 55° . Clear and fine. Mr. Bousman and a native passed down with a scow and a boat, coming from his cabin near the head of the river, where he has been since last summer.

May 23: 7 a. m., 52° ; noon, 60° ; 6 p. m., 55° . Clear and fine. Some of the men are building two small river boats for the station.

May 24: 7 a. m., 38° ; noon, 40° ; 6 p. m., 38° . Cloudy, with rain and a very little snow. Some mail came in from Nome City.

May 25: 7 a. m., 36° ; noon, 40° ; 6 p. m., 37° . Rain and mist all day. Some natives in an omiak passed down the river.

May 26: 7 a. m., 40° ; noon, 42° ; 6 p. m., 39° . Rain and mist all day. The natives who passed yesterday are camped above the station.

May 27: 7 a. m., 40° ; noon, 48° ; 6 p. m., 40° . Chilly and disagreeable most of the day. A. Spring, jr., who is a civil engineer, took the reckonings of the station to-day and found it to be in the latitude $63^{\circ} 46' 40''$ north, and longitude $160^{\circ} 39' 20''$ west.

May 28: 7 a. m., 35° ; noon, 41° ; 6 p. m., 33° . Some of the Laplanders left for Cape Nome to-day in a boat which they built here. The weather is surprisingly cold and raw for this season.

May 29: 7 a. m., 30° ; noon, 38° ; 6 p. m., 35° . Some snow fell last night. The station's freight boat was brought up from Unalaklik.

May 30: 7 a. m., 40° ; noon, 68° ; 6 p. m., 50° . A new small boat was launched. Received mail from St. Michael.

May 31: 7 a. m., 52° ; noon, 66° ; 6 p. m., 52° . Clear and fine forenoon; shower in the afternoon. A native family passed downstream, probably to be in readiness for the salmon.

June 1: 7 a. m., 49° ; noon, 50° ; 6 p. m., 50° . Cloudy, with light showers and sleet in the afternoon. The deer scow which has been on the river's bank has been repaired and was put afloat to-day.

June 2: 7 a. m., 45° . Clear, with west wind. Mr. Kjellmann with a few of the men of the station left for Unalaklik this morning. They took the sailboat and scow upon which was placed the hewed timbers which will be used in building the storehouse for Government goods as they are landed from the ship.

June 3: 7 a. m., 35° . West wind; cold, cloudy, and chilly all day. Mr. Kjellmann returned at noon. He stated that the Laplanders who started for Cape Nome on the 28th ultimo were still detained at Unalaklik by ice in the sea. Goose and ptarmigan eggs were brought in by one of the Lapps this evening.

June 4: 7 a. m., 40° ; 6 p. m., 34° . Cold and cloudy, with chilling west wind.

June 5: 7 a. m., 36° . Mr. Kjellmann with several workmen went down to Unalaklik to erect the warehouse and gather hewn logs from the beach. They will be gone several days.

June 6: 7 a. m., 37° . Still cloudy and cold. The wind remains in the west. The second small river boat is finished and ready for launching. A few fish, the first this season, were caught in nets.

June 7: 7 a. m., 36° . Cloudy, with cold rain from the west. Some seining was done this evening, and a few salmon, trout, blackfish, and graylings were caught. The boat builders have begun work on the new freighting boat.

June 8: 7 a. m., 40° . Cloudy, with a light west wind. Four or five tubs full of fish were caught to-night.

June 9: 7 a. m., 38° . Cloudy and cold, with a west wind. Thermometer registered less than 40° the whole day long. At 2:30 p. m. Mr. Kjellmann and his men returned from Unalaklik. Reports that there is ice in the sound hindering anyone from leaving for Cape Nome.

June 10: 7 a. m., 36° . Southwest wind; cloudy all day.

June 11: 7 a. m., 38° . Southwest wind; the sun appeared for a little while this forenoon. Snowed on the mountains early this forenoon. Coldest temperature during the night, 31° . Aslak Balto and family went to Unalaklik in one of the small river boats this morning.

June 12: 7 a. m., 40° . Southwest wind; cloudy; sun shown part of afternoon.

June 13: 7 a. m., 38° . Southwest wind. Light rain this morning. Cloudy and misty most of the day.

June 14: 7 a. m., 40° . Southwest wind. Cloudy and misty all the day. Stephen Ivanhold with three natives made the station a visit this morning. He reports plenty of ice on the coast.

June 15: 7 a. m., 39° ; noon, 45° . Wind still in the west; cloudy and misty. The Laplanders who started to Cape Nome on the 28th

ultimo, returned to the station last night, on account of the ice and long-continued contrary winds.

June 16: 7 a. m., 41° . Westerly winds; cloudy all day. C. I. Ward and J. Sander, of Port Gardner, came up to the station this evening and will remain over night.

June 17: 7 a. m., 40° . Westerly winds; cloudy and foggy all day.

June 18: 7 a. m., 38° . Westerly winds; cloudy and misty.

June 19: 7 a. m., 40° . Wind southwest; cloudy and rainy most of the day. C. I. Ward and J. Sander left to-day for home, having gone to the Quicks la Bluff River for a boat which was left there last fall, and which they brought down the river yesterday.

June 20: 7 a. m., 42° . Westerly winds; cloudy and misty.

June 21: 7 a. m., 38° . Lowest temperature during the night was 2 degrees below freezing. The wind was blowing from the east this morning, but changed back to the west later in the day. Raining most of the day.

June 22: 7 a. m., 45° ; noon, 49° . West wind; cloudy, with occasional showers during the day.

June 23: 7 a. m., 42° . West wind; rainy. News arrived that A. E. Gardner, of Seattle, had come in on the first steamer and is now at Port Gardner. He brings the first news. Two men arrived from the herd, reporting all well.

June 24: 7 a. m., 40° . Rainy. Mr. Kjellmann and most of the Lapps went to Unalaklik to-day to hear the news. Mr. Kjellmann will remain.

June 25: 7 a. m., 42° . Bright sunshine in forenoon; cloudy later on.

June 26: 7 a. m., 40° . Cloudy; strong west wind. Dr. Gambell and P. H. Anderson, of Golovin Bay, started on foot for St. Michael this morning.

June 27: 7 a. m., 41° . Cloudy; wind from the east.

June 28: 7 a. m., 41° . Cloudy; light west wind. Mr. Kjellmann with some of the station people left for Cape Nome to-day.

June 29: 7 a. m., 45° . Cloudy. Few salmon caught in the trap in front of the station house.

June 30: 7 a. m., 45° . Light west wind; cloudy and misty. Some seining done.



back of Port Clarence offered pound for pound for hauling supplies to Council City, two days' journey. At that time flour was selling at Cape Prince of Wales for 20 cents per pound, and at Anvil City for 50 cents per pound.

Driving the herd to Point Barrow was a valuable experience to our herders, but the loan of their herd has meant a financial loss to them of at least \$3,000.

No deer have been butchered for meat. As the supply of seal and walrus meat and fish has been much less this year than usual, our herders were compelled to subsist, at times, on flour, molasses, and tea, a very unsatisfactory diet.

Since travel is increasing in this part of the continent, allow me to suggest that next summer you make some experiments with pneumatic tire reindeer carts and wagons. At present pack deer are practically the only beasts of burden that can be used inland during the summer months. Carts and wagons would have many advantages over packs. Deermen—Siberians, Laplanders, and Eskimos—unaccustomed to accept anything new, will, no doubt, ridicule such an innovation. But we feel confident that a vehicle built somewhat after the inclosed plan would prove an entire success, and it is hoped that the Department will make the small expenditure necessary to give it a fair trial.

Very respectfully,

W. T. LOPP.

DR. SHELDON JACKSON,

General Agent for Education in Alaska.

Suggestions for making two experimental reindeer carts.

Construct two carts so that they can be combined into a four-wheeled wagon.

Make each of them strong enough to carry 300 pounds, and as light as possible.

Hickory wheels, with pneumatic tires, 3 or 4 inches in diameter—toughest made.

Inches.

Length of axles between wheels.....	34
Diameter of wheels, first cart.....	34
Diameter of wheels, second cart	38

Bed for first cart, about 30 by 38 by 10 inches.

Bed for second cart, about 30 by 42 by 10 inches.

Two pairs shafts, about 50 inches long (clear of bed), 24 inches wide at one end and 14 at the other.

One tongue about 50 inches long.

Extra tires and packages of hickory for changes and repairs.

REPORT OF REINDEER HERD, POINT BARROW.

By H. RICHMOND MARSH, M. D., *Missionary.*

POINT BARROW, *July 25, 1899.*

SIR: I have the honor to offer the inclosed report of deer left in my care last summer by you.

The number of deer in the herd when I took charge was by count only 378, instead of 391, according to the previous estimate.

Skins were so scarce that 14 deer (fawns, male) had to be killed to clothe the herders. Five fawns were so badly bitten by dogs just previous to my taking the herd that they had to be killed to move the herd to its winter pasturage. Three other deer were killed by dogs and 3 by wolves, but we killed 10 wolves by way of a balance. Only 2 deer have been killed by accident by the herders, which I consider wonderful. The total loss is $11\frac{1}{2}$ per cent, while by disease and accident the loss is but $4\frac{1}{2}$ per cent.

About 70 per cent of the fawns were saved. During the first few weeks of the fawning period there was a continual blizzard; at one time the herders were all out consecutively four days and nights saving 30 of the 50 fawns born during those days.

Respectfully submitted.

H. R. MARSH, M. D.

Capt. D. H. JARVIS.

Reindeer account.

Received from Mr. Jarvis:

Females	163
Males	5
Sled deer	20
Fawns	190
	378

From Lapps:

Females	3
Sled deer	1
	4

Increase by fawns	118
	500

Loss, died, and killed:

Females	10	
Males	2	
Sled deer	4	
Fawns	27	
	43	
To Lapps: Sled deer	9	
	52	
Balance on hand	448	

Number of reindeer killed from August 18, 1898, to July 24, 1899.

Date.	Why killed.	Kind.	Number.
1898.			
August 18.	Food	Fawn	1
August 26.	Lame	do	2
September 3.	do	do	2
September 12.	do	do	1
September 25.	Skins	do	5
September 30.	do	do	4
October 6.	do	do	5
October 7.	Wolves	Females	3
November 15.	Lame back	Fawn	1
December 1.	Food	do	1
December 20.	Fight	Female	2
1899.			
January 3.	Miscarriage	Female	1
January 7.	Dogs	Sled deer	2
March 1.	do	do	1
Do.	Lasso	Fawn	1
March 10.	do	do	1
April 1.	Food	do	1
April 15.	Sick	Female	1
May 16.	do	do	1
May 21.	Hemorrhage	Sled deer	1
July 1.	Sick	Female	1
July 24.	do	do	1
Do.	Skins	Males	2
Do.	do	Fawns	2
Total			43

Account of deer killed and lost from Point Hope herd.

One deer, broken neck, female, owned by a Lapp.

One deer, broken back, female.

One deer, broken leg, male, owned by Elektoona.

One deer, broken neck, female, owned by Ahlook.

One deer, sick, retention of urine, female.

Two deer, killed for food on Point Barrow trip.

One deer, killed on account of weak legs on Point Barrow trip, female.

One deer, killed for food by Elektoona and Ahlook, male.

One deer, sick and died, male.

Four deer, died crazy, three males and one female.

One sled deer, swelling of its side, died.

Two deer, lost on Point Barrow trip, females.

One deer ran away, dogs chasing it.

Three fawns died.

One sled deer killed for food July 19, 1899, Lapp and Eskimo.

There were 52 deer remaining at Point Hope August 24, 1899.

D. H. JARVIS,

First Lieutenant, Revenue-Cutter Service.

DR. SHELDON JACKSON TO LIEUT. D. H. JARVIS, R. C. S., CONCERNING
REINDEER AT POINT BARROW.

EATON REINDEER STATION, *August 2, 1899.*

SIR: I have the honor to respectfully request that when you order south to Cape Prince of Wales the reindeer now at Point Barrow and Point Hope that you leave in the neighborhood of Point Barrow 100 head of reindeer for the Presbyterian Mission and 25 head for Ojello as his personal property. Also that you leave with Ahlook and Elektoona, two Point Hope young men, each 50 head of deer as their personal property, making 225 head of reindeer in all. These 225 reindeer I will replace from the Eaton Station. Kindly take receipts from the Presbyterian Mission and the three Eskimos for the deer each receives.

Very respectfully, yours

SHELDON JACKSON.

Lieut. D. H. JARVIS,

Commanding Revenue Cutter Bear.

REINDEER REPORT OF LIEUT. D. H. JARVIS, R. C. S., COMMANDING
U. S. S. BEAR.

UNITED STATES STEAMER BEAR,

Port Townsend, November 3, 1899.

MY DEAR DOCTOR: We arrived on the 1st, and were so busy in Seattle that I could do nothing in making out a report.

I did not bring any deer down from Point Barrow, as I had to take a lot of people on at Kotzebue Sound, and the prospects were we would be too long on the trip. After our experience in coming over this time, I was not desirous of having the deer aboard so long again. I did make arrangements to send all the surplus deer south this winter, and think they will get there all right. I took one adult Lapp and a half-grown Lapp boy from Point Hope to Point Barrow and engaged two good boys there, and also engaged William Marshall to take charge of the herd at \$75 per month from August 13. He is a good man, a thoroughly reliable one, has been two years in the country, and I have every confidence that he will get the deer there or I would not have trusted him with them. I arranged for the 125 to be left at Point Barrow and 100 to be left at Point Hope, and I cautioned the people that there must be better care than before. At Point Hope I tried to trace the boys up a little. The Lapps wanted to come away, saying their time was out and they wanted to go home. I believe I would have taken them if bad weather had not made me get out. At any rate, the ones that came down with the herd will work on to Unalaklik. I tried to get to Cape Judge, and had sent a man there to buy 100 deer for me, but the ice came down and drove me out of



Schoolhouse.

KADIAK, ALASKA.

Photo by R. G. Slifer.

Greek church.



PUBLIC SCHOOL, KODIAK, ALASKA.
Mrs. Anna A. Hill, teacher.



PUBLIC SCHOOL, WOOD ISLAND.

Photo by Robert G. Shier, teacher.



PUBLIC SCHOOL BUILDING AND TEACHER'S RESIDENCE, UNALASKA, ALASKA.

Miss Frances Mann, teacher.



BAPTIST ORPHANAGE, WOOD ISLAND, ALASKA.

Rev. C. P. Coe, superintendent.

East Cape, even. I went to Indian Point and brought 30 deer, but could catch only 19; 1 got killed; leaving 18. It was the rutting season, and it was almost impossible to catch them. I am very sorry. I think we will have to go along modestly and conserve what we have, if we can do no better. Charley told me that his brother had found 48 of the lost deer, and thought there might be more close by. He had been out a week and had to come back for food and boots, as his feet were on the ground. The day I left there Charley sent out a party to bring the deer in. That is a little out of the wreck. I landed the 18 deer at Lopp's. I inclose all the papers, and will explain them when I get to Washington. I would not have left the deer at Point Hope after last winter's experience, except that the people there need them more than anywhere else. They are in a deplorable condition for clothing, and if something is not done soon they will all have to leave there or die. I am going from here to San Francisco, and from there I go east. Captain Tuttle takes the ship at San Francisco.

Very truly, yours,

D. H. JARVIS.

REV. SHELDON JACKSON, D. D.,

Washington, D. C.

P. S.—I had to go to some expense to fit out Mr. Marshall's party, and paid \$41 in money for clothes myself. I left provisions for them everywhere along the route, and think I have fully squared the account you had against us for what I got at Port Clarence two years ago. I sent to Unalaklik beef and pork and beans and coffee, as much as they would take in the schooner.

I left full instructions for Marshall, and, as I said, I have every confidence in his doing what he undertakes. I think he is a good man to hold on to if you need one, and I think you do. This engagement is to end when he arrives at Cape Prince of Wales.

I have had a very busy summer, and I want to get away. I will be glad when I do.

LETTER OF LIEUT. D. H. JARVIS, R. C. S., APPOINTING WILLIAM MARSHALL IN CHARGE OF REINDEER HERD FROM POINT BARROW TO CAPE PRINCE OF WALES.

UNITED STATES STEAMER BEAR,

Cape Smyth, Alaska, August 20, 1899.

SIR: Your engagement is to take charge of the reindeer herd to be driven from Point Barrow to Cape Prince of Wales this winter.

Two Laplanders, Lars Larsen Hatta and Jacob Larsen Hatta, together with two natives, Okpully and Ung sk inyer, will comprise your party.

Take up your quarters in the old Refuge Station and first get your outfit in good shape for traveling. Provide yourself with sufficient sleds and harness and see that each man has a good outfit of clothing before starting. When you are sufficiently settled to take charge of the deer, arrange with Dr. H. R. Marsh to divide the herd at present here, leaving 100 in charge of Dr. Marsh for the Presbyterian Mission, and 25 for Ojello, native herder.

According to Dr. Marsh's account, the herd now numbers 448, so that after the division is made there should be in your charge 323. The males, sled deer and spotted deer, are to be divided in proportion.

When, in your judgment, the season has advanced sufficiently to move the herd with safety, you will proceed along the coast to the southward. Safety rather than speed is desired, and it is expected that you will use all endeavors to keep the herd from loss by straying and attacks by wolves and dogs.

Provisions will be left for you, in charge of Mr. Nelson, at Point Hope, and Mr. Robert Samms, at Kikiktaruk, Hotham Inlet. Cross the mountain range back of Cape Lisburne when, in your judgment, it will be best to do so, but when you come to Cape Kruzenstern it will be better to travel around Kotzebue Sound rather than attempt crossing on the ice.

When in the vicinity of Point Hope, 48 deer are to be given to Ahlook and Elektoona, native herders there, and upon arriving at Cape Prince of Wales the whole herd is to be turned over to Mr. W. T. Lopp.

Your engagement is at the rate of \$75 per month from August 13, and will be terminated by Mr. Lopp.

Should it be necessary for you to go to any expense for aid or outfits during your trip, give orders on the commanding officer of the *Bear*, but exercise due care in all such matters.

In case of necessity deer may be killed for food, but this is not to be resorted to unless the necessity is pressing; and an accurate account must be kept of all deer thus killed or lost from the herd in any way. Further orders will be left for you at Point Hope, Kikiktaruk, and Cape Prince of Wales.

Respectfully, yours,

D. H. JARVIS,

First Lieutenant, Revenue-Cutter Service, Commanding.

MR. WILLIAM MARSHALL.

LETTER OF LIEUT. D. H. JARVIS, R. C. S., DIRECTING WILLIAM MARSHALL TO DELIVER REINDEER HERD TO W. T. LOPP.

UNITED STATES STEAMER BEAR,

Cape Prince of Wales, Alaska, September 25, 1899.

SIR: Upon arriving at this place you will place yourself under the orders of Mr. W. T. Lopp as to the disposition of the reindeer herd

and the Lapps and native herders. The Lapps are to continue on to the Eaton Reindeer Station, at Unalaklik, and the natives to remain at Cape Prince of Wales until the summer of 1900, when they will be returned to Point Barrow on the *Bear*.

Your service will terminate when in the opinion of Mr. Lopp you have completed your work with the herd.

I inclose a list of provisions left in the charge of Mr. Lopp. These should be divided for the use of the Lapps to Unalaklik, for the care of the natives until the coming summer, and for yourself.

Very respectfully,

D. H. JARVIS,

First Lieutenant, Revenue-Cutter Service, Commanding.

MR. WILLIAM MARSHALL,

In charge of Reindeer Herd, Cape Prince of Wales, Alaska.

REPORT OF THE REINDEER HERD AT GOLOVIN BAY, BY P. H. ANDERSON.

DEAR SIR: I have the honor and pleasure of submitting to you the report of the herd at this place.

The past winter has been exceptionally favorable, with little snow and few storms. The cold, however, averaged more than the previous winter. The deer had good moss throughout the winter, which kept them in fine condition.

During the year 4 deer have been killed for food, 3 have been killed by dogs, 1 by some disease of the throat, and 1 by heart trouble. Of the 157 fawns born, 10 have died at the time of calving or shortly after, leaving 147 living fawns.

The herders were kept busy during the winter training all the deer that could be driven. I commend the boys for their good work.

In speaking of the utility of the deer, I must say we have done good service with them. We have hauled more than 5 tons of goods from here to Nome City (Cape Nome) during the winter, a distance of 75 miles, some of the deer having made 5 trips. I wish to state this fact especially for the benefit of the "grand jury" which attacked you concerning the reindeer enterprise in Alaska. They state, "The plain, simple truth is that each and every attempt at the use of reindeer for transportation in Alaska has been a failure." That our grand jury, who are supposed to make their charges judicially, and base them on facts, are carried away by delusions or false reports, whichever it may be, is beyond excuse. Let the grand jury, or whoever may belie the usefulness of the deer, learn the facts; they are plain and easily obtained, if they are sought for. That the deer take the place of the dogs the following will prove.

While I was taking freight up to Nome City for 10 cents per pound, Mr. Dexter, the trader here, was hauling it at 12 cents. His expenses ran so high, on account of providing food for his dogs, that he asked me to take his goods up for 12 cents, which I did. This, I think, is sufficient to prove beyond all question that the deer are the animals for this country. Would that there were reindeer stations every 150 miles between Point Barrow and Sitka; then the question of transportation and mail service would be solved.

Very respectfully, yours,

P. H. ANDERSON.

SHELDON JACKSON, D. D.,
General Agent of Education

RECEIPT OF N. V. HENDRICKS FOR REINDEER AND SUPPLIES.

PORCUPINE, ALASKA, *September 1, 1899.*

Received of Mr. H. E. Redmyer, on this date, in behalf of Mr. N. V. Hendricks, 92 head of reindeer.

J. M. WOODRUM.

Following is a list of goods received from Mr. H. E. Redmyer, to be paid for by N. V. Hendricks, to Eaton Reindeer Station, Alaska:

1 camp stove.....	\$15.00	2 files	\$1.75
1 10 by 12 tent	5.00	1 brace and bits	1.00
3 camp kettles.....	3.00	1 drawing knife .....	.75
1 teakettle	1.00	1 small camp ax.....	.50
3 frying pans.....	3.00	1 pound gunpowder	1.00
1 plate.....	.75	1 box gun caps .....	.25
1 cup .....	.25	1 seal hide	1.50
1 knife and fork.....	1.75	1 herd dog.....	50.00
1 teaspoon .....	.25	1 musket or shotgun.....	1.00
1 mixing spoon.....	1.00	2 Winchester rifles, 30-30	14.00
1 coffeepot	3.00		
1 butcher knife.....	.50	Total	106.25

J. M. WOODRUM.

CORRESPONDENCE CONCERNING SUPPLIES FURNISHED THE LAPP OVERLAND EXPEDITION BY THE ALASKA COMMERCIAL COMPANY.

DEPARTMENT OF THE INTERIOR,

BUREAU OF EDUCATION,

Washington, D. C., May 2, 1899.

MY DEAR SIR: I inclose herewith, for your information, a copy of a letter to the Secretary of the Interior with regard to the payment of a bill for supplies furnished by the Alaska Commercial Company to Mr.

H. E. Redmyer, also a copy of a letter to the Secretary of the Interior with regard to the replacing of the deer borrowed from Cape Prince of Wales and Antisarlook by the relief expedition.

Kindly write letters to me at once with regard to these two matters, giving your recollection as to the promises of the War Department and telling me where, in your files, these promises may be found.

Very respectfully, yours,

W. T. HARRIS, *Commissioner*.

Dr. SHELDON JACKSON,

Occidental Hotel, Seattle, Wash.

MAY 2, 1899.

SIR: I have the honor to acknowledge, by reference, a letter from the honorable the Secretary of War transmitting vouchers in duplicate of a claim of the Alaska Commercial Company amounting to \$1,461.70, certified as correct by Dr. Sheldon Jackson, for supplies furnished the reindeer expedition in charge of H. E. Redmyer, and stating that said reindeer were turned over to the Department of the Interior in accordance with letter of March 10, 1898.

I beg leave respectfully to state that Dr. Sheldon Jackson reported to me that he was given to understand that the honorable the Secretary of War had agreed to undertake the expenses incident to delivering the remnant of the reindeer herd turned over to the Department of the Interior as far as Circle City, on the upper Yukon. Besides this, the entire expenses of the Lapland herdsman and teamsters were assumed by the honorable the Secretary of War for the period of a year or more from March 5, 1898. Upon consulting the files I find a copy of a letter from Secretary Bliss, under date of March 10, addressed to the honorable the Secretary of War, reciting his instructions to Dr. Jackson and stating in the last paragraph that he understands from the telegram of March 5, 1898, to General Merriam that the War Department has contracted to furnish subsistence for the reindeer attendants at least for one year. I find also accompanying this letter a copy of the War Department telegram of March 5, 1898, which directs that such reindeer as are not sold shall be "quartered at the military camp in the American territory on the Yukon River near the Canadian boundary, or where pasture is found." This passage is understood to mean the camp near Circle City, on the upper Yukon.

It further directs that "all men without families and all men with families who desire to go shall accompany the reindeer." The third paragraph continues "the Department has contracted to furnish subsistence for the attendants for one year. You will send with attendants of reindeer relief supplies, provisions for their sustenance until they can be reached with supplies at the military camp by boat from

St. Michael, when balance of provisions for their sustenance for one year will be sent them. The men remaining with the women and children will be quartered in your Department and rationed from the relief supplies until their departure, when you will send the balance of their yearly subsistence with them to St. Michael."

There were subsequent changes of plan in regard to the reindeer herd, due to the delay in getting the reindeer to the moss pastures on the upper waters of the Chilkat River, and the consequent mortality in the herd, but I do not think that there was any change of plan as to the assumption by the War Department of the expenses incident to the journey from the pasture grounds of the Chilkat River to the "military camp in the American territory on the Yukon river near the Canadian boundary;" in other words, the expense of the removal of the herd from the Upper Chilkat to Circle City was to be assumed by the War Department. This certainly has been my understanding of the matter, and had I supposed for a moment that the expenses of the removing of the remnant of the herd to Circle City would be considered a charge upon the Interior Department I should have notified you at once that there is no fund available from the appropriation for education in Alaska to meet said expenses.

I have written to Dr. Jackson concerning the matter and think that he can recall definitely the terms proposed by the honorable the Secretary of War after the plans assumed a final shape.

I inclose copies of the War Department telegram referred to, and of the letter of March 10 from the honorable the Secretary of the Interior to the honorable the Secretary of War, referred to in this letter. I return also the letter from the honorable the Secretary of War, together with its two inclosures—the vouchers, in duplicate, of a claim of the Alaska Commercial Company aggregating \$1,461.70.

Very respectfully, your obedient servant,

W. T. HARRIS, *Commissioner*.

THE SECRETARY OF THE INTERIOR.

SIR: I have the honor to acknowledge your letter of May 2, with regard to the bill of supplies furnished by the Alaska Commercial Company to Mr. H. E. Redmyer; also a copy of your letter of May 2, to the honorable the Secretary of the Interior, with reference to it.

The bill of supplies procured by Mr. Redmyer of the Alaska Commercial Company was for the support of the Lapps, which the War Department agreed to furnish until January 31, 1899, it being the fulfilling of the contract which was made by the War Department with the Lapps in Lapland to feed and clothe them for one year from February 1, 1898.

The War Department has already paid several similar bills, and when its attention is called to it will pay this, as it is properly due

to the relief fund in charge of the War Department. It undertook to procure in Lapland, transport to the United States, and place in the Yukon Valley, both the reindeer and the herders and their families, making a contract with the herders for the same. This bill is in fulfillment of said contract.

If there is any hesitation on the part of the War Department to paying it, place it on file until my return next fall.

Mr. Redmyer met with more difficulties in crossing the country than he had anticipated, partly due to the unknown nature of the country, and partly due to the weakened condition of the deer after the detention at Haines Mission last spring. This necessitated purchases of provisions at several points along the Yukon Valley, and in midwinter, when prices are at their highest. Consequently, while the bills are large, the amount of provision received is not large.

Very truly, yours,

SHELDON JACKSON.

HON. W. T. HARRIS, LL. D.,

Commissioner of Education, Washington, D. C.

DR. SHELDON JACKSON APPOINTED SPECIAL AGENT OF THE WAR
DEPARTMENT FOR THE PAYMENT OF THE LAPPS.

WAR DEPARTMENT,

Washington, April 21, 1899.

SIR: You are hereby designated as special agent of the War Department for the purpose of closing the accounts of the Lapps for salary due under their contract with the War Department for services in connection with the Alaska Relief Expedition.

You are advised that the sum of \$15,000 has been deposited with the United States depository at Portland, Oregon—The First National Bank of Portland, Oregon—to the credit of Capt. Edgar S. Walker, Eighth United States Infantry, acting assistant quartermaster, now on duty at Fort St. Michael, Alaska. Captain Walker has been authorized and directed to issue checks in payment of the amounts due the Lapps on account of salary upon proper vouchers being furnished, duly certified to by you as special agent of the War Department in this matter.

Before the First National Bank will pay Captain Walker's checks it will probably require a copy of his signature, duly certified to. The most direct manner of settling this matter appears to be for you to leave your signature with the First National Bank of Portland while en route to Fort St. Michael, if practicable, and upon arriving at the latter place to obtain Captain Walker's signature, and certify it with your signature, and transmit the same to the bank at Portland. It is suggested, however, that it would be well for you, while en route, to stop at Portland and have a full conference with the bank, in order to

determine upon a satisfactory method for obviating any difficulties that may arise in the payment of these checks.

I also hand you herewith a letter addressed to Captain Walker, advising him of your appointment as special agent and of his designation as a disbursing officer, with full particulars in connection therewith; also check book, pay rolls, and vouchers for use in the disbursement to Captain Walker.

Very respectfully,

G. D. MEIKLEJOHN,
Assistant Secretary of War.

DR. SHELDON JACKSON,
Bureau of Education, Washington, D. C.

WAR DEPARTMENT,
Washington, April 21, 1899.

SIR: You are advised that for the purpose of closing the accounts of the Lapps for salary due under their contract with the War Department for services in connection with the Alaska relief expedition, the sum of \$15,000 from the appropriation "relief of people in mining regions of Alaska" (act of December 18, 1897) has been placed to your credit in the First National Bank of Portland, Oreg.

You will disburse the same upon proper vouchers being furnished, duly certified by Sheldon Jackson, who has been designated as special agent of the War Department in this matter.

As soon as this service has been completed by you, you will turn into the Treasury any unexpended balance from the allotment of the \$15,000, and submit a special report direct to this office of your disbursements in this matter.

Very respectfully,

G. D. MEIKLEJOHN,
Assistant Secretary of War.

Capt. EDGAR S. WALKER,
*Eighth U. S. Infantry, Acting Assistant Quartermaster,
Fort St. Michael, Alaska.*

RUSSIAN AMBASSADOR WRITES LETTER OF INTRODUCTION AND COMMENDATION FOR DR. SHELDON JACKSON TO RUSSIAN AUTHORITIES IN SIBERIA.

[Translated from Russian by Rev. V. Alexandrof, Seattle, Wash., U. S. A.]

DEPARTMENT OF THE FOREIGN AFFAIRS,
THE RUSSIAN IMPERIAL EMBASSY,
Washington, U. S. A., April 10/22, 1899, N. 105.

NICOLA IVANOVICH:

DEAR SIR: The late ambassador of the United States to St. Petersburg—who is at present the Minister of the Interior—Hon. Ethan Hitchcock, has applied to me through the Minister of the Foreign

Office, honorable John Hay, to give to your excellency a letter of introduction about honorable Dr. Sheldon Jackson, who is general superintendent of the board of education of Alaska.

Dr. S. Jackson is about to leave the continent for inspection of the schools and reindeer stations in Alaska and the islands; he also intends to visit the city of Petropavlovsk and some other parts of eastern Siberia in order to purchase there reindeer for the United States Government.

I have the honor of asking your excellence to be so kind as to use every possible support to honorable Dr. S. Jackson for the successful fulfilling of his mission.

Thanking you in advance for every possible attention you may pay to the above-recommended person, I am, your excellence,

Sincerely, yours,

COUNT KASSIN.

The Governor-General N. J. Grodekof,

Khabarovsk, Siberia.

COMMISSIONER OF EDUCATION ASKS AN INCREASE IN REINDEER APPROPRIATION FROM \$12,500 to \$25,000.

DEPARTMENT OF THE INTERIOR,

BUREAU OF EDUCATION,

Washington, D. C., February 3, 1899.

SIR: In October last I had the honor to submit to your office a request for an appropriation of \$25,000 for the support of reindeer stations in Alaska, for the instruction of Alaskan natives in the care and management of the reindeer, and for the purchase and introduction of reindeer from Siberia for domestic purposes.

In the estimates of appropriations for the fiscal year ending June 30, 1900, page 276 (printed copy), only \$12,500 is asked. This will not be sufficient. For, in addition to the usual work, the support of the reindeer stations, the instruction of apprentices, the enlargement and care of the herds now under the control of the Government, this Bureau is required during the coming fiscal year, in accordance with a pledge made by the Government, to return to the American Missionary Association at Bering Straits the reindeer which the Government borrowed in the winter of 1897-98, and their estimated increase, for the relief of the whalers near Point Barrow.

Antisarlook and Tautook were promised 220 deer and the American Missionary Association 432 head in the summer of 1898. Thus, in accordance with the agreement of the Government, 652 head were to be returned last summer, but only 161 were returned, leaving 271 head to be returned to the Congregational Mission and 220 to Antisarlook and Tautook, or 491 in all.

The only method of returning these deer is to purchase a corresponding number in Siberia and bring them to Alaska. This requires the additional sum of \$12,500, which is asked for this year, making \$25,000 in all.

Also, last October I submitted for your consideration the following estimate of the needs of education in Alaska for the fiscal year ending June 30, 1900. In this estimate were three officials at salaries amounting to \$4,230; rent, \$255; traveling expenses, \$421; 27 teachers at \$19,192.49; supplies for 20 schools, \$1,251.48; fuel and lights for 20 schools, \$1,101.90; repairs on 20 schools, \$220.49; freight on the above, \$3,302.59; making an aggregate of \$29,974.95. This is upon the basis of the expenditures for the year ending June 30, 1898, and the \$30,000 is all needed for the schools that are already in existence. Since the discovery of gold and the rapid influx of miners into Alaska villages with a varying population of from 100 to 3,000 people are springing up through all that mining region, and it is estimated that during the last three years upward of 40,000 people have settled in Alaska. Some of the miners have brought their families with them, and others would bring their families if they could be sure of school facilities. Congress has provided no way for taxation for school purposes. From every section urgent calls are being made for the establishment of new schools. The following is a list of the additional schools needed, with estimated expense:

Place.	Number of children.	Cost of houses.	Cost of supplies.	Teachers' salaries.	Total expenses.
Kotzebue Sound.....	50	\$1,500	\$300	\$500	\$2,300
Unalaklik.....	100	1,500	300	500	2,300
Yakutat.....	75	1,500	300	500	2,300
Bethel.....	75	1,500	300	500	2,300
Carmel.....	75	1,500	300	500	2,300
Golovin Bay.....	75	1,500	300	500	2,300
St. Michael.....	50	2,500	500	1,200	4,200
Peavey.....	30	.....	500	1,200	1,700
Circle City.....	50	a 500	500	1,200	2,200
Rampart.....	50	3,000	500	1,200	4,700
Weare.....	30	.....	400	1,200	1,600
Dyea.....	75	2,000	250	900	3,150
Skagway.....	100	2,000	250	900	3,150
Kosoreffsky.....	100	.....	300	500	800
Total.....	.....	.....	.....	.....	25,000

a For repairs.

Thus the necessities of education in Alaska require for the coming year \$25,000. In the estimates of appropriations (p. 276) the amount asked for is \$40,000; but for the opening of additional schools, which are imperatively needed, \$30,000 additional is required, making \$70,000 in all. It is possible that the opening of schools at one or two places may be postponed for another year, reducing this estimate to \$60,000.

I am informed that it is proposed in the coming Congressional legislation with regard to Alaska to apply the receipts for high license,

through the Secretary of the Interior, for the support of schools. If this legislation shall be consummated, it will not be necessary to ask for an appropriation after this year. But in order to meet the present demands for schools this Bureau should have the \$60,000.

I have therefore the honor to ask that you will recommend to Congress for the fiscal year ending June 30, 1900, the following appropriations: Reindeer in Alaska, \$25,000, instead of \$12,500; education in Alaska, \$60,000, instead of \$40,000.

Very respectfully, your obedient servant,

W. T. HARRIS, *Commissioner*.

THE SECRETARY OF THE INTERIOR.

DEPARTMENT OF THE INTERIOR,

Washington, February 3, 1899.

SIR: I have the honor to transmit herewith a communication of this date from the Commissioner of Education requesting that the estimates of appropriations for 1900 for reindeer in Alaska be increased from \$12,500 to \$25,000, and that that for education in Alaska be increased from \$40,000 to \$60,000. The reasons given by the Commissioner for requesting these increases are fully set forth in his communication.

The recommendation of the Commissioner of Education meets with my approval, and the same is respectfully forwarded through your Department for the appropriate action of Congress.

Respectfully,

C. N. BLISS, *Secretary*.

THE SECRETARY OF THE TREASURY.

INCREASED APPROPRIATION FOR REINDEER, SUNDRY CIVIL BILL, APPROVED MARCH 3, 1899.

REINDEER FOR ALASKA: For support of the reindeer station at Port Clarence, Alaska, and for the purchase and introduction of reindeer from Siberia for domestic purposes, twenty-five thousand dollars.

COMMISSIONER OF EDUCATION REQUESTS TRANSPORTATION FOR
DR. SHELDON JACKSON.

DEPARTMENT OF THE INTERIOR,

BUREAU OF EDUCATION,

Washington, D. C., January 24, 1899.

Sir: Referring to the fact that in November, 1897, on occasion of the arrival in San Francisco of the report that eight whaling vessels were fast in the ice near Point Barrow, and that the crews were in danger of starvation, and to the action of the President and his Cabinet in sending an expedition in charge of Lieut. D. H. Jarvis, United

States Revenue-Cutter Service, to their relief, and to the fact that on account of the impossibility of transporting food supplies in sufficient quantities across the thousand miles of trackless, Arctic wilderness in winter, a decision was reached to secure the domestic reindeer at Cape Prince of Wales and Cape Rodney, drive them across the country to Point Barrow and slaughter them for food as occasion required, I respectfully call attention to the fact that the herds found at the places mentioned were respectively the property of the American Missionary Association at Cape Prince of Wales and the Eskimo herders at Cape Rodney, the Government contingents which had furnished the nucleus of these herds having been previously withdrawn in accordance with the instructions given to this Bureau by the honorable the Secretary of the Interior.

Lieutenant Jarvis was instructed to pledge the Government to return to their owners a number of deer equal to the number taken, with the addition of the natural increase—220 to Cape Rodney and 432 to Cape Prince of Wales, making 652 deer to be returned by the Government.

It had been intended to supply the 652 deer required from the purchase of a large herd in Siberia. Extraordinary preparations had been made to obtain at least a thousand deer from the purchasing station which had been established on St. Lawrence Bay, Siberia. The result, however, was disappointing inasmuch as only 161 were obtained in this way. This number was left at Cape Prince of Wales in August, 1898, leaving 491 still to be replaced.

It was found impossible to maintain a purchasing station in Siberia unless the corps of employees at the station is sufficiently large to protect itself against marauding natives. Experience has also shown that purchases of deer may be made by a Government vessel communicating with the shores of Siberia, but the results of this method have also proved unsatisfactory owing to the shortness of the open season. Accordingly it is important that some better method of procuring the deer shall be devised.

On the shores of Okhotsk Sea and along the coast of Kamchatka, accessible to the reindeer country of Siberia, are a number of Russian trading posts, and it may be found practicable to arrange with Russian merchants to purchase reindeer in Siberia and either deliver them to the United States Government on the Alaskan side or have them ready in herds at Siberian seaports for transportation across to Alaska by a United States vessel.

I am informed that the winter ice breaks up first along the Siberian side of Bering Sea, and that the whalers who visit those waters are accustomed to pass along the Kamchatka coast on their way farther north. The cutter *Bear*, which is usually sent on the Bering Sea cruise, by sailing a few weeks earlier than usual, could make the coast of Asia, in the region of Vladivostock, and by following up the coast with the disappearance of the ice reach its cruising ground in Bering

Sea at the usual time. While thus following the coast, an opportunity could be given to the general agent of education for Alaska to confer with the Russian merchants with regard to the purchase of reindeer for the Government in large quantities. It is a well-known fact that in certain sections of Siberia reindeer are broken to the saddle as well as to harness. This would seem to indicate that they are a larger breed than those now in Alaska. Such a coasting cruise would furnish the Government with definite information on this subject. If the Siberians have a larger and stronger breed of reindeer, it is important that a number of bucks should be secured and, for the improvement of the stock, be crossed with the herds that have been successfully introduced into Alaska.

For nine seasons past, with the single exception of the summer of 1898, through the permission of the Secretary of the Treasury and the courtesy of the Chief of the Revenue-Cutter Service and of the captains commanding cutters cruising in Alaskan waters, the general agent of education for Alaska has been able to establish new and inspect old schools, and to introduce domestic reindeer into Alaska. There being no regular line of steamers to northern Siberia and to Arctic Alaska, this Bureau has depended for the continuance of its important work in those far-distant regions upon the cooperation of the Treasury Department and the facilities afforded by its revenue cutters.

I therefore have the honor to respectfully suggest that a letter be written to the honorable the Secretary of the Treasury requesting, if compatible with the rules of his office,

First, permission for Dr. Sheldon Jackson, general agent of education for Alaska, to be received upon the cutters that in their regular cruise call at the places he may need to visit, especially upon the cutter *Bear* in her cruise to Bering Sea and the Arctic Ocean; also that he will kindly request the commanding officers to extend to Dr. Jackson such facilities as may be convenient.

Second, that the commanding officer of the cutter *Bear* be instructed to convey Dr. Jackson to the Siberian coast and to call at Vladivostock, Petropaulovsk, and such other points along the Siberian coast as may be convenient while en route to the vessel's cruising ground in Bering sea.

Third, that the commanding officer of the *Bear* be further authorized to transport to the Alaskan coast such reindeer as it may be possible to secure for fulfilling the pledge of the Government to return 491 deer to Cape Prince of Wales and Cape Rodney.

I have the honor to be, very respectfully, your obedient servant,

W. T. HARRIS,
Commissioner.

THE SECRETARY OF THE INTERIOR.

DEPARTMENT OF THE INTERIOR,

Washington, January 25, 1899.

SIR: I have the honor to transmit herewith a copy of a letter from the Commissioner of Education, and to commend to your favorable consideration the request therein contained, that Dr. Sheldon Jackson, the general agent of education in Alaska, be accorded accommodations on the revenue cutter *Bear* in her cruise to Bering Sea and the Arctic Ocean during the present year, and that the commanding officers of other cutters in the service be directed to extend to him such facilities as may be practicable and convenient in the discharge of his duties in the district of Alaska. Also that the commanding officer of the cutter *Bear* be directed to convey Dr. Jackson to the Siberian coast, and to call at Vladivostock, Petropaulovsk, and such other points along the Siberian coast as may be convenient while en route to the vessel's cruising ground in the Bering Sea.

Furthermore, that he be directed to transport to the Alaskan coast such reindeer as it may be possible to secure, for fulfilling the pledge of the Government to return 491 deer to Cape Prince of Wales and Cape Rodney. These animals are to replace those taken by the Government from the American Missionary Association, at Cape Prince of Wales, and certain Eskimo herders at Cape Rodney, and were used in connection with the expedition sent for the relief of the whalers imprisoned in the ice near Point Barrow.

Very respectfully,

C. N. BLISS, *Secretary.*

THE SECRETARY OF THE TREASURY.

THE PROCURING AND FITTING OUT OF THE U. S. S. THETIS FOR
PURCHASING REINDEER.

DEPARTMENT OF THE INTERIOR,

BUREAU OF EDUCATION,

Washington, D. C., January 31, 1899.

SIR: I have the honor to call to your attention my letter of the 24th instant, asking of the Secretary of the Treasury, through you, the privilege of transportation for the agent of education in Alaska on the cutter *Bear* along the Siberian coast, and the transportation of such reindeer as can be obtained on the trip, especially to replace those which were borrowed by the Treasury Department and driven to the relief of the whalers, with the promise that an equal number of reindeer would be returned to the owners in the summer of 1898.

I am informed that the Treasury Department is compelled to decline the request upon the ground that the duties devolving on the cutter *Bear* during the coming season are so pressing that the vessel will be unable to give any time to the securing of reindeer.

The Chief of the Revenue-Cutter Service of the Treasury Department, however, suggests that the U. S. S. *Thetis*, a sister ship of the *Bear*, has been recently placed out of commission by the Navy Department and can be temporarily secured by the Treasury Department for the use of the Interior Department in its reindeer operations this coming summer.

The expense of six months' service of the ship is estimated by the Chief of the Revenue-Cutter Service as follows:

To pay of crew	\$8,000	Fuel.....	2,500
Rations.....	1,600	Incidentals	2,500
Ship chandlery.....	250		
Engineer stores	350	Total	20,000
Repairs to ship.....	5,000		

The number of reindeer which the Government promised to return in the summer of 1898 was 652; the number actually returned was 161, leaving 491 reindeer still to be returned.

It is therefore of the utmost importance that these reindeer be purchased and returned to the parties from whom they were borrowed while the occasion is still fresh in the mind of the Government and before the number grows larger by delay.

I have the honor, therefore, to ask that the chairman of the Committee on Appropriations of the House of Representatives having in charge the sundry civil bill for the fiscal year ending June 30, 1900, be requested to add on page 248 of printed estimates of appropriations for 1900, last line, to the expenses of the Revenue-Cutter Service, immediately following the words "the enforcement of the provisions of the law in Alaska," the following paragraph: "For turning over the U. S. S. *Thetis* and her outfit and equipments from the Navy Department to the Treasury Department for temporary service as a revenue cutter, and officered by details from the Revenue-Cutter Service, to be employed in the service of the Department of the Interior for its work in connection with the transportation of reindeer from Siberia to Alaska, to be disbursed under the direction of the Secretary of the Treasury, the same to be immediately available, the sum of, or as much as may be necessary, \$20,000."

Very respectfully, your obedient servant,

W. T. HARRIS, *Commissioner*.

THE SECRETARY OF THE INTERIOR.

DEPARTMENT OF THE INTERIOR,

Washington, D. C., February 1, 1899.

SIR: I have the honor to transmit herewith a copy of a letter from the Commissioner of Education, dated the 31st ultimo, and to commend to your favorable consideration the request therein contained that

an item be inserted in the sundry civil appropriation bill appropriating \$20,000 for the outfitting and equipment, etc., of the United States steamer *Thetis*.

It is proposed to use this steamer in the transportation of such reindeer as can be procured by the agent of education in Alaska during the coming season, and return to their owners certain reindeer borrowed by the Treasury Department and driven to the relief of the beleaguered whalers in Bering Sea in 1897.

Very respectfully,

THOMAS RYAN, *Acting Secretary*.

HON. J. G. CANNON,

*Chairman Committee on Appropriations,
House of Representatives.*

TREASURY DEPARTMENT,

OFFICE OF THE SECRETARY,

Washington, D. C., February 4, 1899.

SIR: Respectfully referring to a letter addressed to you by the honorable Secretary of the Interior, under date of the 1st instant (copy herewith), commending to your favorable consideration a proposed appropriation of \$20,000 for the repairing, outfitting, etc., of the U. S. S. *Thetis*, said vessel to be used as a revenue cutter in the service of the Interior Department, for the transportation of reindeer to Alaska for the purpose stated, I have the honor to say that this matter has been under advisement by the Treasury Department, and I recommend that the appropriation be made.

It is not possible with the means at its disposal for this Department to extend the aid in the transportation of reindeer from the Siberian to the Alaskan coast requested by the Department of the Interior. I consider the request of the Secretary of the Interior, as set forth in the inclosed letter, a reasonable one, and advise that it be complied with.

Respectfully, yours,

L. J. GAGE, *Secretary*.

HON. J. G. CANNON, M. C.,

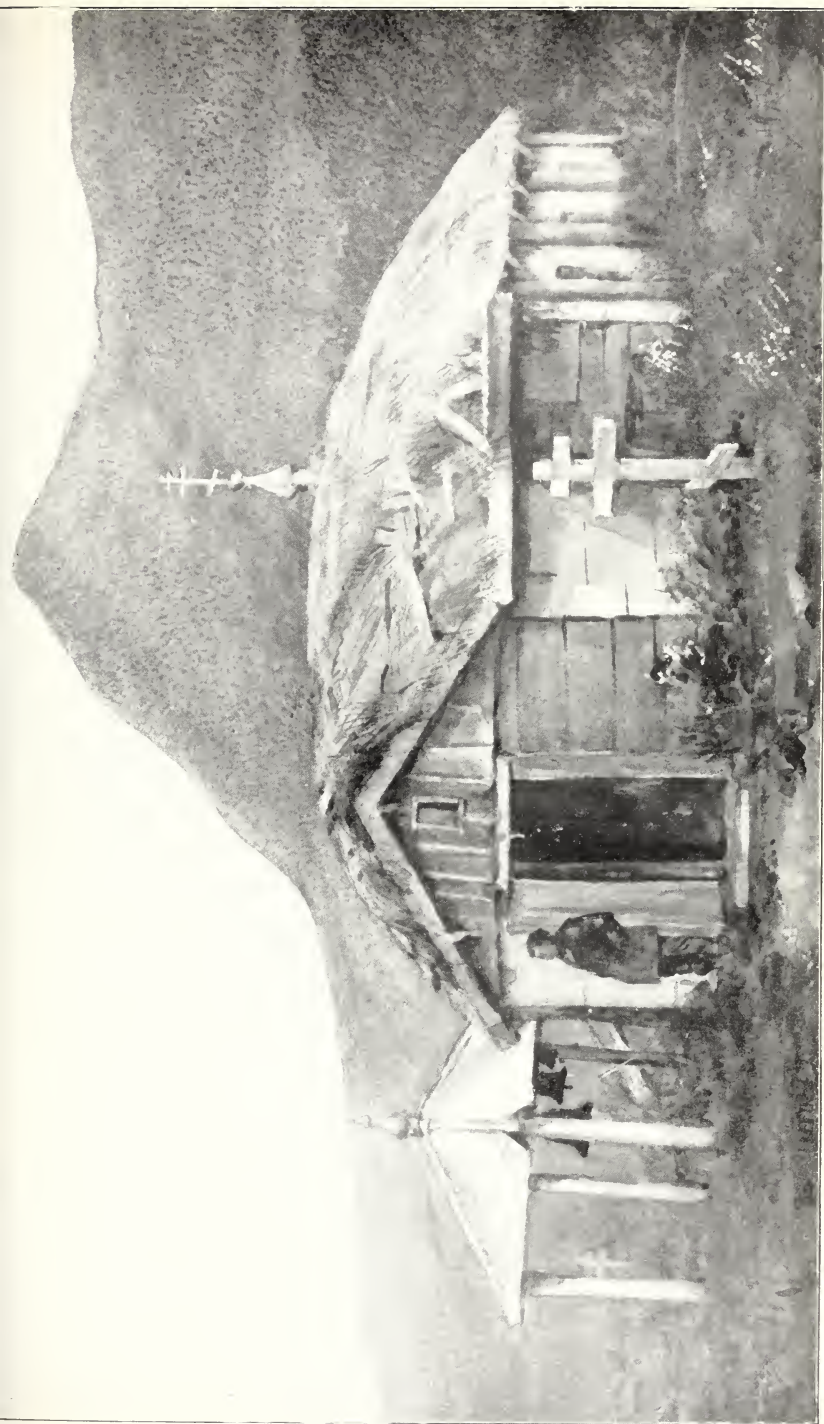
*Chairman Committee on Appropriations,
House of Representatives, Washington, D. C.*

TREASURY DEPARTMENT,

OFFICE OF THE SECRETARY,

Washington, D. C., February 4, 1899.

SIR: I am informed that the honorable Secretary of the Interior has requested an appropriation be made by Congress to facilitate the business of that Department in the transportation of reindeer from the



RUSSO-GREEK CHURCH, ATTU, ALASKA.
(The most western church in North America.)
Photo by Lieut. Harry G. Hamlet, R. C. S.





UNIMAK ISLAND AND STRAITS.

Photo by Assistant Engineer H. N. Wood, R. C. S.



Siberian to the Alaskan coast. Application has been made to this Department for a suitable vessel to do this work. There is but one vessel under my control that would at all answer the purpose, and as there is imperative need for that vessel in other directions, I have suggested to the Secretary of the Interior that the U. S. S. *Thetis*, now presumed to be out of commission at the Mare Island Navy-Yard, might be obtained for temporary service. I have, therefore, the honor to request that, if the appropriation above referred to be made by Congress, you will turn the *Thetis*, with boats and equipments, over to this Department to be used temporarily as a revenue cutter and for the purpose above indicated, with the understanding that she shall be returned to the Navy Department upon the completion of the service mentioned, and that all expenses for repairs, etc., be borne by this Department. I have respectfully to request an early reply.

Respectfully, yours,

L. J. GAGE, *Secretary*.

THE SECRETARY OF THE NAVY.

TREASURY DEPARTMENT,

OFFICE OF THE SECRETARY,

Washington, D. C., February 23, 1899.

SIR: It will be remembered that in the fall of 1897, 8 whaling vessels, with more than 400 men, were imprisoned in the Arctic ice near Point Barrow, Alaska, and not being provisioned for a long stay the crews were in danger of starvation. The attention of the President was called to the danger of the whalers, and at a Cabinet meeting the Secretary of the Treasury was directed to send relief. Accordingly, the Revenue Cutter *Bear* was fitted out and dispatched to the north. Near Cape Vancouver, Bering Sea, a small party, consisting of First Lieut. D. H. Jarvis, Second Lieut. E. P. Bertholf, and Surg. S. J. Call, of the Revenue-Cutter Service, were put ashore in December, 1897, to make an overland journey to Point Barrow.

As it was impossible to carry ordinary provisions to Point Barrow, a thousand miles across that Arctic land in winter, Lieutenant Jarvis had been instructed to procure, if possible, the herds of domestic reindeer owned by private parties at Cape Prince of Wales and Point Rodney, drive them to Point Barrow, slaughter them, and issue as rations. Upon the arrival of Lieutenant Jarvis he found that the owners of the reindeer would not let them go except upon condition that the same number of reindeer, with the natural increase of fawns, should be returned to them in the summer of 1898. He therefore pledged the Government to return to the several owners 643 reindeer the following season.

The relief expedition, with the herd of reindeer, reached the imprisoned whalers on March 29, 1898, and resulted in the saving of a large number of lives.

It now remains for the Government to fulfill its pledge and return an equal number of reindeer to the men who gave up their reindeer.

With the increased work thrown upon the cutter *Bear* through the influx of miners at St. Michael, Golovin Bay, Kotzebue Sound, and other points on the northern coast, it will be impossible for that vessel to procure those reindeer in Siberia and transport them to the Alaskan coast.

I have, therefore, applied for the temporary transfer of the U. S. S. *Thetis* from the Navy Department, to be used as a revenue cutter during the season of 1899 for the procuring of the reindeer and thus fulfilling the promise of the Government.

The expense of six months' service of the ship is estimated by the chief of the Revenue-Cutter Service as follows:

To pay of crew	\$8,000	Fuel.....	\$2,500
Rations.....	1,600	Incidentals.....	2,300
Ship chandlery.....	250		
Engineers' stores.....	350	Total	20,000
Repairs to ship.....	5,000		

I have the honor, therefore, to suggest that an amendment be made to the sundry civil bill, appropriating \$20,000, or as much thereof as may be necessary, for the fitting out of the U. S. S. *Thetis*, as a revenue cutter and employing her in Bering Sea in fulfillment of the Government obligations incurred in rescuing the starving whalers.

I would further suggest that the same be made immediately available and ask your favorable action thereon.

Respectfully, yours,

O. L. SPAULDING,

Acting Secretary.

Hon. WM. B. ALLISON,

Chairman Committee on Appropriations,

United States Senate.

APPROPRIATION FOR FITTING OUT U. S. S. THETIS, SUNDRY CIVIL BILL,
APPROVED MARCH 3, 1899.

For the purpose of repairing and defraying the running expenses of the United States steamer *Thetis* for a period of six months, said vessel to be used as a revenue cutter, and to perform service for the Department of the Interior in procuring reindeer and transporting them to the coast of Alaska, twenty thousand dollars, and the Secretary of the Navy is hereby authorized to transfer said vessel to the Treasury Department.

REINDEER BARTER GOODS FOR USE OF U. S. S. THETIS.

[Telegram.]

TREASURY DEPARTMENT,
Washington, D. C. May 15, 1899.

SHELDON JACKSON,

(Care Seattle Hardware Company, Seattle, Wash.)

Thetis will probably reach St. Lawrence Bay early in July. Suggest leave means at Seattle for Buhner purchase reindeer.

H. H. TAYLOR,

*Assistant Secretary.*SEATTLE, WASH., *May 24, 1899.*

GENTLEMEN: You are hereby authorized to furnish Lieutenant Buhner, commanding U. S. S. *Thetis*, with \$200 worth of barter goods, for use on the coast of Siberia in purchasing reindeer. You will send the bills, as usual, to the Bureau of Education, Washington, D. C., for collection.

Truly, yours,

SHELDON JACKSON.

Messrs. S. FOSTER & Co.,

*San Francisco, Cal.*SEATTLE, WASH., *May 24, 1899.*

MY DEAR LIEUTENANT: I received a telegram from Mr. Taylor, assistant secretary, suggesting that I consider the advisability of leaving some trade goods at Seattle for you to pick up upon your arrival. The barter goods that I expected to trade for reindeer with are all stowed away in the *Bear*, so that I can not divide with you, but I will give you an order on the Seattle Hardware Company or S. Foster & Co., to procure additional goods to the amount of \$200. Then when you meet the *Bear*, if you have not enough, we will furnish you a portion of the supply from the *Bear*.

I would suggest that you will find the following articles good trade: Tobacco; powder; shot; steel traps; calico; duck; large case knives; a little flour; a few boxes of pilot bread; a box of tea, with the tea in small paper packages; some tin plates and cups; also, cheap iron spoons. Brass kettles, also, are good trade; but there is a supply of them at the mission station, at St. Lawrence Island, that you can get when you go along.

Have the bills made out for the same on Bureau of Education blanks, which the merchants have, and mail to the Bureau of Education, at Washington.

I have promised Conrad Siem, buying for J. S. Kimball & Co., San Francisco, that the cutters would not buy deer this year in the neighborhood of St. Lawrence Bay, but leave that field for Mr. Siem to work in, as he was stationed there a year by the Government and is acquainted with the people. All that Mr. Siem buys will be delivered to the Government by him on the Alaska side.

I would suggest, however, that after leaving Unalaska you sail into the bight or bay southwest of Cape Navarin. There are large herds of reindeer in that vicinity. You will remember that is the place where, in 1890, the *Bear* distributed for the Government \$1,000 worth of presents to the natives for having cared for Vincent and some wrecked whalers. The herds are not always near the beach, but if you can get into communication with the deer-men at that point, I have no doubt that you can pick up a load. What you succeed in securing, kindly deliver to W. T. Lopp, Cape Prince of Wales, and take his receipt for the same.

By the time you have got up there with one load I hope that we, with the *Bear*, will overtake you, and then we can arrange for further work. If, however, you fail to make connection with the *Bear*, after visiting the country from Cape Navarin to Indian Point, I would suggest that your next trip be to Whalen, north of Bering Strait, and try the coast between Whalen and Cape Serdze. There are are a great many deer, ordinarily, in that region.

I will leave a copy of this letter with the Seattle Hardware Company here, so that if it does not reach San Francisco before you sail, you may find the same instructions here.

Wishing you a pleasant and prosperous trip, I remain,

Very truly, yours,

SHELDON JACKSON.

Lieutenant BUHNER,

Commanding U. S. S. Thetis, San Francisco, Cal.

Officers of the United States Revenue Cutter Bear, 1899.—First Lieut. David H. Jarvis, commanding; Second Lieut. Ellsworth P. Bertholf, executive officer; Second Lieut. James G. Ballinger, Second Lieut. Aaron L. Gamble, Third Lieut. Henry Ulke, jr., Chief Engineer Herbert W. Spear, Second Asst. Engineer Theo. G. Lewton, Surgeon S. J. Call, M. D.

Officers of the United States Revenue Cutter McCulloch, 1899.—Capt. Wash. C. Coulson, commanding; First Lieut. Daniel P. Foley, executive officer; Second Lieut. Walker W. Joynes, Second Lieut. William E. AtLee, Third Lieut. John Mel, Chief Engineer, James H. Chalker, First Asst. Engineer Charles A. McAllister, Second Asst. Engineer Henry F. Schoenborn, Surgeon, Dr. Carpenter.

Officers of the United States Revenue Cutter Perry, 1899.—Capt. William F. Kilgore, commanding; First Lieut. Percy W. Thompson, executive officer; Third Lieut. Charles W. Cairnes, Third Lieut. Eben Barker, Chief Engineer Harry L. Boyd, Second Asst. Engineer Taylor W. Ross, Surgeon, Dr. Ludlow.

Officers of the United States Revenue Cutter Thetis, 1899.—First Lieut. Albert Buhner, commanding; Second Lieut. S. M. Landrey, executive officer; Second Lieut. Claude S. Cochran, Second Lieut. Harry G. Hamlet, Second Asst. Engineer John I. Bryan, Surgeon, Dr. Hawley.

[Telegram.]

WASHINGTON, D. C., May 4, 1899.

Rev. SHELDON JACKSON,

Care Revenue Steamer Bear, San Francisco, Cal.

Cruise of *Bear* in place of *Thetis* arranged along lines suggested; orders mailed Tuttle, Seattle.

O. L. SPAULDING, *Acting Secretary.*

[Telegram.]

WASHINGTON, D. C., May 4, 1899.

Dr. SHELDON JACKSON,

Care of S. Foster & Co., 26 California Street, San Francisco, Cal.

Treasury has ordered *Bear* to take place of *Thetis* in reindeer work.

W. T. HARRIS, *Commissioner.*

LETTER OF WILLIAM A. KJELLMANN WITH REGARD TO DELIVERY OF DEER TO W. T. LOPP.

EATON STATION, ALASKA, November 2, 1898.

DEAR SIR: Frederick Larsen and party arrived here yesterday from Cape Prince of Wales, via Golovin Bay and St. Michael. He reports that 159 head of deer were delivered to Mr. Lopp. Fr. Larsen also reports that Mr. Lopp was to send men up to Point Hope to bring down to Cape Prince of Wales the whole of the Point Hope herd, then he (Mr. Lopp) will replace Charley's herd and keep the balance, together with the 159 brought by Fr. Larsen, as this 159 are looked upon as only ample compensation for losses, etc. This arrangement was made by Lieutenant Jarvis, I understand. It would be all right if we had not been calculating differently. In the first place, we have the four Eskimos whom we sent up to care for the herd; they were to have a herd, or at least what belongs to them out of the Point Hope herd.

Now we will have to support them until we can let them have a herd, and that may take years. We can not throw them off without giving them what was promised, so you will kindly remember to send them a supply of food, etc., next summer. Secondly, we have the two Lapp families up there. You will also kindly remember to send them a supply next summer.

We are getting along O. K.

Respectfully,

WM. A. KJELLMANN.

DR. SHELDON JACKSON,

Washington, D. C.

P. S.—The gold fields between Golovin Bay and Port Clarence are turning out wonderfully well.

RECEIPT OF W. T. LOPP FOR PAYMENT IN FULL FOR DEER BORROWED
BY LIEUT. D. H. JARVIS.

CAPE PRINCE OF WALES, ALASKA,

August 19, 1899.

Received from United States Bureau of Education, through Dr. Sheldon Jackson, general agent, 714 reindeer, being payment in full for the 292 reindeer borrowed by Lieut. D. H. Jarvis, R. C. S., January 25, 1898, for the relief of the whalers at Point Barrow, together with the natural increase of said deer for the years 1898 and 1899.

W. T. LOPP.

REPORT OF LIEUT. A. BUHNER, COMMANDING U. S. S. THETIS.

U. S. REVENUE-CUTTER SERVICE,

STEAMER THETIS,

Port Clarence, Alaska, August 4, 1899.

SIR: In accordance with instructions from the Department to perform work in the interest of the Department of the Interior in transportation of reindeer from the Siberian coast, which deer, I am informed, are to be purchased by you, and, as requested by you in your letter of July 18, the U. S. S. *Thetis* cruised as far as Cape Serdze, on north coast of Siberia, endeavoring to purchase the animals.

A landing was made at Whalen on the morning of July 20, but as sickness prevailed in the chief's family, trade was stopped, as is the custom of the natives. Proceeding further along the coast, wind from north and weather thick, a stop was made at Stockan evening of July 20, where natives visited the ship and reported no deer nearer than some 10 miles inland. As a thick snowstorm prevailed and drift ice was coming in from the north, I could not communicate with the herders, and proceeded further along the coast, leaving Itchan morn-

ing of July 21. Could not communicate with the natives at a village eastward of Cape Serdze, where the deer were obtained some years ago by the *Bear*, as heavy drift ice obstructed the landing, but made an anchorage on east side of Cape Serdze morning of July 21; wind blowing fresh from the north, making it impossible to round the cape, especially as some heavy ice was drifting in. Morning of July 22 landed Lieut. H. G. Hamlet and interpreter Chio to proceed to west side of Cape Serdze for information about the possibility of purchasing deer. Lieutenant Hamlet returned in the evening, after tramping some 20 miles, reporting that some deer could be obtained beyond the cape, but only a few, as larger herds were some miles inland.

For a couple of years no reindeer buying had been done in this portion of Siberia, consequently the deer men did not drive the herds to the coast. July 23 rounded Cape Serdze, and at 11.45 a. m. anchored off Neutan. Succeeded in obtaining a promise to get 18 deer, but find myself handicapped by a demand for whisky instead of legitimate barter goods. Natives inform me that Conrad Siem pays whisky for his deer, and a deer herder will sell all his herd for whisky, but only a few for legitimate barter goods. As the herd was some miles inland men had to be sent to drive them to the coast, and at noon July 24 was informed that I could get my deer at east side of Cape Serdze. Consequently steamed over there; arrived at the proper place to meet the herd about 2.30 p. m., but the deer had not arrived. About 6.30 p. m. the herd was seen coming over the hills some 2 miles back inland, and by 7.15 p. m. Lieutenant Hamlet and interpreter went ashore with the barter goods to close the bargain and bring off all deer purchased. First boat full came alongside at 11.15 p. m., and at 2.20 a. m. July 25 had received on board 40 deer. As ice was drifting in from the north-east, got under way and worked our way slowly through some pretty heavy drift ice. No other stop could be made to see if more deer could be purchased, as the shore was lined with ice, preventing a landing. Lieutenant Hamlet and Chio were sent ashore at Whalen, at 2.30 p. m. July 25, to see if trade could be made there, but owing to sickness prevailing in the chief's family nothing could be done, and we continued on our way across toward Cape Prince of Wales, where we arrived at 3.50 a. m. July 26. Seeing two flags hoisted, the signal agreed on by us that you would be there to be taken off, anchored, but found that one of the flags was on Mr. Lopp's house, the other on a small steamer anchored in line with it. Rounded the cape, and at 7 p. m. anchored off Mr. Lopp's reindeer station westward of Cape York, and landed 40 reindeer, all in good condition, turning them over to the deer herders employed by Mr. Lopp.

July 27 got under way in the morning, crossed Bering Strait to purchase some more deer on the North coast, as I found the animals in much better condition there than in St. Lawrence Bay.

July 28, at 4.50 a. m., after steaming through some drift ice and dense fog, came to anchor off Kalura. Deer men came on board and reported the herd some miles inland, but as I was anxious to buy and promised them good trade, they left to drive the deer to the coast by night, as the day was too warm for the animals to travel.

July 29, about 5 a. m., the deer men who had driven the herd to the coast arrived and barter commenced. At 11.40 a. m. received first load of 8, and by 2 p. m. had taken on board 27. Steamed eastward, stopped off Itschan, sent Lieutenant Hamlet ashore to ascertain if any deer could be purchased, but found that the herd was some 10 miles inland, and only about 5 could be offered for sale. It would require six days before the herd could be driven to the coast, hence continued steaming east. July 30 stopped off the place where Mr. Lopp keeps his herd and landed 27 deer in good condition, so that the *Thetis* under my command purchased in Siberia 81 deer, 67 of which were delivered to Mr. Lopp at Cape Prince of Wales, and 14 landed on Point Spencer.

It seems to me to be useless to again go on the North coast this year, as we have about all they will sell, unless you pay with whisky. You may succeed in procuring larger numbers there next year, as the herders know now that the deer is again in demand and have promised to drive the herds to the coast.

Respectfully,

A. BUHNER,

First Lieutenant, Commanding.

DR. SHELDON JACKSON,

General Agent of Education for Alaska.

DR. SHELDON JACKSON INSTRUCTS DR. GAMBELL TO FURNISH ANTISARLOOK WITH REINDEER.

U. S. S. THETIS.

September 15, 1899.

SIR: I feel very anxious with regard to the redeeming the pledge of the United States Government to Charley (Antisarlook), that they would return him his deer borrowed in January, 1898. Through a combination of hindering circumstances the pledge is at the present date unfulfilled. The fulfilling of this pledge is the most important duty devolving upon you this fall. At Nome City I authorized Mr. Kjellmann to negotiate with Mr. Andersen, of the Swedish Mission, Golovin Bay, for them to drive the herd to Charley, but Mr. Andersen had left Nome City for Golovin before our arrival, so that Mr. K. was unable to communicate with him. Situated as we are, I see no other way than that you should take five good Lapps, charter Stefan's (if that is his name) schooner and go over to Golovin Bay, select the 100 belonging to the Government (25 males and 75 females), then add to them the deer belonging to the Episcopalians and Moses, also add the 48 deer which the *Thetis* landed August 23, and start them across the country to Charley, at Synrock, about 20 miles west of Nome City.

on the coast. You can exercise your own judgment about going with them from Golovin to Synrock. If any of the Lapps in the party, when they reach Synrock, shall desire to remain at Nome City, you can accept their resignations, and if they wish supplies to live on during the winter they can be furnished from the station in amount equal to the salary due them at the time of their resignation. Those, however, who thus use up their salary can not afterwards demand that they be returned to Norway. If you yourself can go with the party from Golovin to Synrock, I wish you would, as I would then feel more confident that the work would be done properly. You might issue two months' rations at the station before starting, and have the schooner meet you at Synrock to return you to Unalaklik. When the deer (328) are delivered to Charley, take his receipts for the same and send them, in duplicate, to Washington. Fish River, at Golovin, is the only stream of any size between Golovin and Synrock, and Mr. Dexter says that there is nothing to prevent driving the herd at any time of the year between the two places. If you can arrange to go at once, or as soon as you can get the schooner, you will be back before the winter sets in. If you prefer, however, you can wait until November or December and go with sleds. Be sure, however, to get the work done before January 31, as after that time you will not have a sufficient number of men to do it. Perhaps during your necessary absence you can get Mr. Quist to go up to the station once a week and look around.

If you can devise any better plans you are at liberty to do so, only get the deer to Charley by the 1st of January, without fail. Impress upon Charley that he is not permitted to sell female deer to anyone.

If you start from Eaton and go across country with sled deer and find in the herd you are driving to Charley better deer than those you have, you can make an exchange and take the best for the Eaton station. Praying that you may have wisdom and guidance in this important undertaking,

I remain, very truly, yours,

SHELDON JACKSON, *General Agent.*

Dr. F. H. GAMBELL,

Acting Superintendent Eaton Reindeer Station.

You can suspend the school at the station until you have more help.

EATON REINDEER STATION.

Alaska, October 1, 1899.

As to the deer being delivered to Charley, it shall be done. Owing to the lateness of the receipt of your letter your first plan will fail. I will go the 1st of November with men and sleds.

Yours,

F. H. GAMBELL.

Dr. SHELDON JACKSON,

United States General Agent of Education in Alaska.

REPORT OF DR. F. H. GAMBELL OF EXPEDITION TO SYNROCK AND
CAPE PRINCE OF WALES.DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,*Synrock, Alaska, December 2, 1899.*

DEAR SIR: Having another opportunity to write to you, and fearing that you may not get my other letters, I will give in full an account of my trip with the deer on my way to Cape Prince of Wales via Nome and Synrock. I started from Eaton on the 6th of November and reached the herd on the morning of the 9th. I took from the herd 259 deer belonging to the Government and 1 belonging to Captain Walker. In addition to these I also took 21 sled deer for the purpose of hauling ourselves as well as tent, bedding, and provisions, making in all belonging to the Government 280. We had to go around Norton Bay as it was not frozen sufficiently for crossing. At another point we had to cut our way over the mountains, making about 6 miles in two and a half days. We reached Golovin Bay on the evening of the 20th of November. We made the following division of the herd which is known as the Golovin Bay herd.

Ninety-eight deer were selected, the original number given to the two missions minus 2, which 2 had been removed by your order previously, as I was informed.

Forty-four were then taken—the number belonging to the Government—and placed in the herd by the Laplander left in charge of them this last summer. He stated that 2 of the 48—the original number—had been killed by dogs since in his care, and that 2 of them belonged to the mission. Two which had been put in the herd last winter were then taken out.

Two belonging to Captain Walker were removed. Moses's deer were then selected and were as follows in regard to sex and number: Males, 5; females, 35; calves, 25. A division of what remained after taking out those belonging to the Golovin Bay herders was then made, which resulted in the Government getting, males, 26 (7 at present at Port Clarence); females, 16; calves, 39.

On the first day out from the Eaton herd 4 deer were returned on account of unfitness to travel. On the second day out 1 had to be killed on account of injuries received on the previous day.

One deer was left at Golovin Bay, not being able to travel. One was killed after leaving Golovin Bay as it could not keep up with the herd. Seven sled deer were left at Golovin Bay to be used upon our return trip. Following is the number of deer in the herd at different times:

Left Eaton with 280 Government deer.

Removed 4 Government deer November 8.

Killed 1 Government deer November 9.

Left at Golovin Bay 8 Government deer November 21.

Added to the herd 290 Government deer November 23.

Killed 1 Government deer November 25.

In Port Clarence 7 Government deer November 25.

Total number in herd 549 Government deer on reaching Synrock.

One deer is sick and had to be hauled for the last 25 miles. I do not know that it will get well. Charley has received 42 of the 100 which I learn were landed at Port Clarence for him. I can not find out where the rest of them are, nor what ship landed them at Port Clarence. You probably know more about that than I do. Charley states that he has learned that some have wandered into the herds around Port Clarence. I will try and find where they all are, as I intend to go on through with Mr. Lopp's deer. You will notice that I did not get enough from the herd at Golovin Bay to pay Charley as I intended, but I think that with the deer which I find in his care that all will be well and that I can pay the number back in full.

The deer are in an excellent condition and traveling is good. I send three men home from here, and take three to Cape Prince of Wales with me. Personally speaking, I am well and enjoying the comforts (?) on the trail. I trust that I may be worthy in every way of your confidence and may do the work well. I am sorry the herd at Golovin Bay did not meet your expectations. Every deer was lassoed and counted, and I think you would have made the same division I did had you been present.

Very respectfully, your servant,

FRANCIS H. GAMBELL, M. D.

DR. SHELDON JACKSON,

General Agent of Education in Alaska, Washington, D. C.

REPORT OF DR. F. H. GAMBELL'S RETURN TO EATON REINDEER STATION.

EATON REINDEER STATION.

Alaska, January 3, 1900,

DEAR SIR: I have this day returned from my trip to Cape Prince of Wales, and will state that everything undertaken so far has been very successful and has been done in order and under my special supervision. I will report to you in full. I have already sent Charley Antisarlook's receipt for the 328 deer and a partial report of my trip.

Respectfully, yours,

FRANCIS H. GAMBELL, M. D.

DR. SHELDON JACKSON,

General Agent of Education in Alaska, Washington, D. C.

RECEIPT OF CHARLEY ANTISARLOOK FOR PAYMENT IN FULL FOR
REINDEER BORROWED BY THE GOVERNMENT.

POINT RODNEY,
Alaska, December 2, 1899.

Received from the United States Bureau of Education, through Dr. Sheldon Jackson, general agent, 328 reindeer, being payment in full for the 133 reindeer borrowed by Lieut. D. H. Jarvis, R. C. S., January 19, 1898, for the relief of the whalers at Point Barrow, together with the natural increase of said deer for the years 1898 and 1899.

CHARLEY ANTISARLOOK.

CORRESPONDENCE WITH J. S. KIMBALL COMPANY CONCERNING THE
PURCHASE OF REINDEER.

SAN FRANCISCO, *March 2, 1899.*

DEAR SIR: A responsible firm in this city, controlling a small auxiliary vessel, is willing to fit the same for the purchase of domesticated reindeer in Siberia, providing the Government is ready to contract for animals delivered at Port Clarence at remunerative figures. With the experience gained during last winter I feel assured that I will be able to land from 300 to 400 deer this coming summer, and also make arrangements for further supplies in years after. Private parties, for limited numbers, have offered \$25 per head. If the Government is prepared to contract for a number of deer, a speedy answer to that effect will be appreciated.

I have the honor to be, very respectfully, yours,

CONRAD SIEM,
422 Fulton Street, San Francisco, Cal.

DR. SHELDON JACKSON,
General Agent, etc., Washington, D. C.

DEPARTMENT OF THE INTERIOR,

BUREAU OF EDUCATION,
Washington, D. C., March 24, 1899.

SIR: Your telegram and letter of March 11, 1899, have both been received. In reply to your proposition to deliver through H. Liebes & Co. reindeer at Port Clarence "400 or more at \$25 each," I would state that I am ready to agree to purchase from H. Liebes & Co. this summer, delivered at Port Clarence, Alaska. in good condition, 500, or a less number, of female reindeer at the rate of \$25 each. The law prevents my entering into a contract for future years, but if this method of securing the deer proves successful it seems probable it will solve the problem of introducing reindeer into Alaska. If large

purchases of deer at the rate of \$25 per head could be made from private parties it would not be necessary for the Bureau of Education to charter a vessel in the future.

I am willing, further, to agree for this summer not to arrange with other private parties in Alaska for the purchase of reindeer for the Government.

Congress has made an appropriation for fitting out the U. S. S. *Thetis* for replacing the reindeer borrowed in the winter of 1898 from Point Rodney and Cape Prince of Wales. If the *Thetis* finds an opportunity of loading up with reindeer between Kamchatka and Indian Point she will do so. The *Thetis* may also cruise from Walen to Cape Serdze after reindeer, in case it does not find a supply from Indian Point, as the Government feels under the necessity of procuring this season sufficient deer to replace the herds above mentioned. It is not intended to purchase deer between Indian Point and East Cape.

With what Messrs. Liebes & Co. can furnish and the *Thetis* procure, it would seem as if a large number of reindeer should be procured. Lieutenant Jarvis will be in command of the *Thetis* and will be accompanied by Dr. Sheldon Jackson, agent of this Bureau.

This Bureau is very anxious that your project should prove a success.

Very respectfully,

W. T. HARRIS, *Commissioner*.

Mr. CONRAD SIEM,

422 Fulton street, San Francisco, Cal.

SAN FRANCISCO, April 17, 1899.

DEAR SIR: On the strength of Dr. Harris's letter to me of March 24, which says (1) it is not intended—by the *Thetis*—to purchase deer between Indian Point and East Cape; (2) this Bureau is very anxious that your project should prove a success, I have arranged with J. S. Kimball to fit the steamer *Albion* for the purchase of deer in Siberia.

We have the offer of considerable freight from private parties and the vessel will leave here on May 20.

We would like to have, of course, as soon as possible, assurance whether the Department is willing to contract for all the deer we purchase, and whether it still adheres to the intention as quoted above. Interference by the *Thetis* with our buying would naturally raise the cost of deer for us, and our prices to the Government would advance accordingly.

I have the honor to be, very respectfully, yours, etc.

CONRAD SIEM,

Care of J. S. Kimball, 22 Market street.

Dr. SHELDON JACKSON,

General Agent, etc., Washington, D. C.

SAN FRANCISCO, *April 17, 1899.*

DEAR SIR: On the strength of your letter to me of March 24, I have about completed arrangements with J. S. Kimball to fit the steamer *Albion* for the purchase of reindeer in Siberia.

You must be aware that the purchasing of reindeer from the Chowchu population is a business requiring for success a knowledge of the character of the people. A stranger among them will become the dupe of the nefarious element, who will waste his time with idle promises, and intimidate the better class and cause them to hold aloof. With the experience gained during last winter, I feel assured that I shall be able to purchase a comparatively large number of deer between Indian Point and East Cape, and lay my lines for a continuous supply in years to come. If the Government is desirous to forward the introduction of domesticated reindeer into Alaska, I feel assured that it will be to their advantage to encourage me as much as possible in this undertaking till the business has reached a footing when reindeer will have become a regular article of commerce between Siberia and Alaska. It is of some importance to my success that I take up connections again this summer with the Siberian deer traders.

The *Albion* will sail from here on May 20. We will carry up considerable live stock to supply miners, etc., with fresh meat. There is a good demand for it in the prosperous diggings at Golovin Bay.

We would like to have, as soon as possible, a definite answer whether the Department intends to purchase all the deer we shall be able to procure this year at the prices written to Dr. Jackson on April 3.

I have the honor to be, very respectfully, yours, etc.,

CONRAD SIEM,

Care of J. S. Kimball, 22 Market street, San Francisco, Cal.

DR. W. T. HARRIS.

Commissioner of Education, Washington, D. C.

SAN FRANCISCO, *May 6, 1899.*

SIRS: In accordance with our verbal agreement, I hereby, in behalf of the United States, agree to pay your company at the rate of \$25 per head for all the female reindeer that you will deliver in good condition on shore during the summer and fall of 1899 at Cape Prince of Wales, Port Clarence, or vicinity of Point Rodney, on the northern shores of Bering Sea. Please send me your written acceptance of the same.

Very respectfully, yours,

SHELDON JACKSON,

United States General Agent of Education in Alaska.

MESSRS. J. S. KIMBALL COMPANY,

No. 22 Market street, San Francisco, Cal.

Mr. William A. Kjellman or W. T. Lopp will count and give you a receipt for reindeer delivered.

SAN FRANCISCO, *May 8, 1899.*

DEAR SIR: I shall leave San Francisco on the steamer *Albion* on or about May 25 to purchase reindeer for the United States Government. The *Albion* will cover the territory between Indian Point and East Cape of the Siberian coast, and I respectfully ask you to let me have that section of Siberia exclusively.

I have the honor to be, very respectfully, yours,

CONRAD SIEM,

Agent for J. S. Kimball Company.

Dr. SHELDON JACKSON,

General Agent, Education in Alaska.

DEAR SIR: In accordance with your request I will leave the above portion of the coast for your exclusive buying.

Very truly yours,

SHELDON JACKSON.

Mr. CONRAD SIEM,

San Francisco, Cal.

NOME CITY, *July 29, 1899.*

DEAR SIR: I have Mr. Lopp's receipt for 105 reindeer, which were landed in his herd on July 27. Lopp's herder, Keok, counted out 90 female and 15 male. Mr. Lopp advised me that you stood ready to accept male as well as female at the same figures. The deer were all lought at St. Lawrence Bay. Business in connection with our store at Nome City necessitates the return of the *Albion* to San Francisco. We shall be back in these waters by the middle of September and we will proceed again to cross to Siberia after another load of deer. I have fitted out a number of deermen with stocks of trade goods to buy deer for me, and I am under the impression that I shall be able to get a larger number of deer in the fall, when they, too, will be in better condition to be ferried across. I was in hopes of falling in with the *Bear* at this port to discuss matters with you.

I have the honor to be, very respectfully, yours, etc.,

C. SIEM,

Agent J. S. Kimball, San Francisco, Cal.

Dr. SHELDON JACKSON, *General Agent, etc.*

AT SEA, UNITED STATES CUTTER BEAR.

July 26, 1899.

SIR: As Mr. Kjellmann will probably not be at Port Clarence, it will be necessary for you in delivering reindeer for the Government to deliver them to W. T. Lopp, as it will need his count and receipt to secure pay from the Government.

Mr. Lopp will take some male deer at same price.

In haste, truly yours,

SHELDON JACKSON.

Mr. CONRAD SIEM,

Nome City, Alaska.

REINDEER TRANSPORTATION OF UNITED STATES TROOPS.

FORT ST. MICHAEL, ALASKA,

October 5, 1898.

DEAR SIR: Mr. Shephard and I have been talking about trying to get one of your Lapps to look after our deer this winter. You have quite a number, and if you can spare me one we could probably make some satisfactory arrangement with him. If you decide to let him come, we would like him to bring our deer down here where traveling is good.

Dr. Edie has a sled at Mr. Karlsen's; will you let him bring that down, also?

Lieutenant Bell has two deer and I have two; Dr. Edie had one and spoke of buying another, but I don't know if he did so.

I would like to get mine and Lieutenant Bell's. If I can be of any service to you here, let me know. I sent your mail by Dr. Gambell.

Hoping that you are well and pleasantly located, I am,

Very respectfully,

E. S. WALKER.

Mr. W. A. KJELLMANN,

Unalaklik, Alaska.

FORT ST. MICHAEL, ALASKA, *December 16, 1898.*

DEAR SIR: When Mr. Kjellmann was here he told me that he would let me have a team of reindeer for my own use and that he would send it down with the teams that were to come before the holidays, provided I let him know in time. I would like to get the team. If you can, please send a team that will be easy to handle. I don't want to fool with wild deer or with fighters. As I understand it, the Lapp drivers can handle any of the deer, so it does not matter much to them whether the deer are wild or not—otherwise I would not ask this favor.

Also, if you can spare me one set of harness and one sled I would like to get them. But if you need your sleds, which is likely, I can have one made here, but I would like to get a set of harness—I have one set of my own.

Will you please let my messenger ride back on one of the sleds?

I hope that you are well.

Kindest regards to Mr. Karlsen and family and to yourself.

Wishing you all a merry Xmas, I am, very sincerely,

E. S. WALKER,

Dr. F. H. GAMBELL,

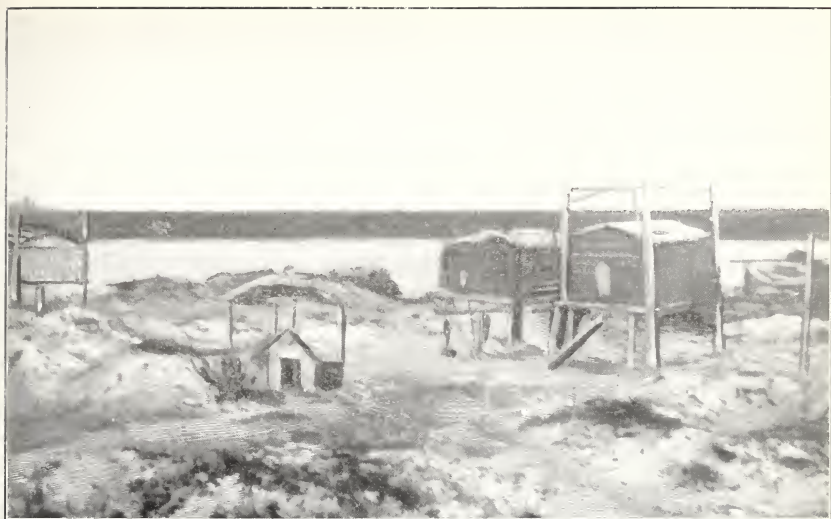
Unalaklik, Alaska.

I don't think Dr. Gregory or his wife will go to Unalaklik. Mr. Hatch and his wife may go.

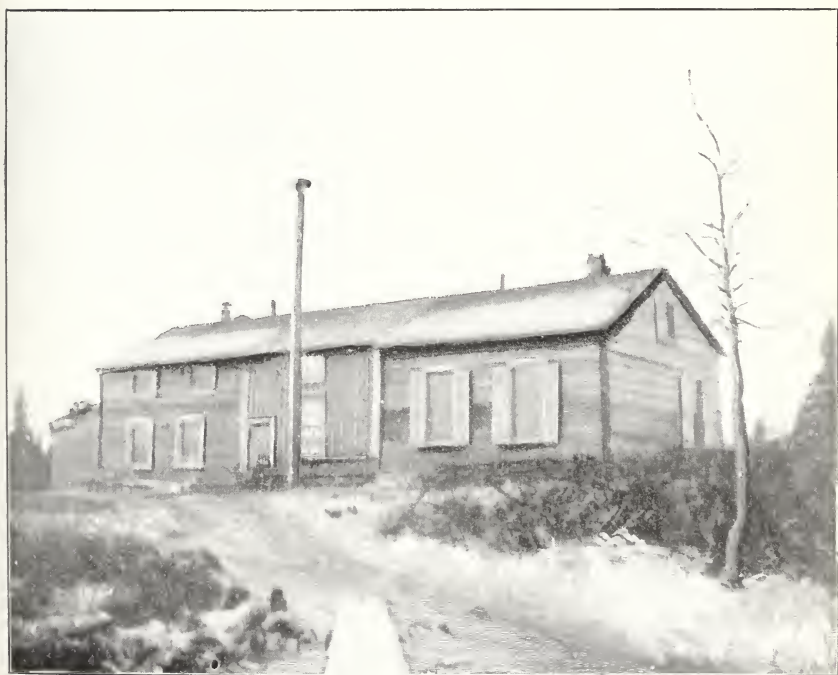


MISSION AT BETHEL, ON THE KUSKOKWIM.





THE NATIVE VILLAGE AT OUGAVIG, ALASKA.

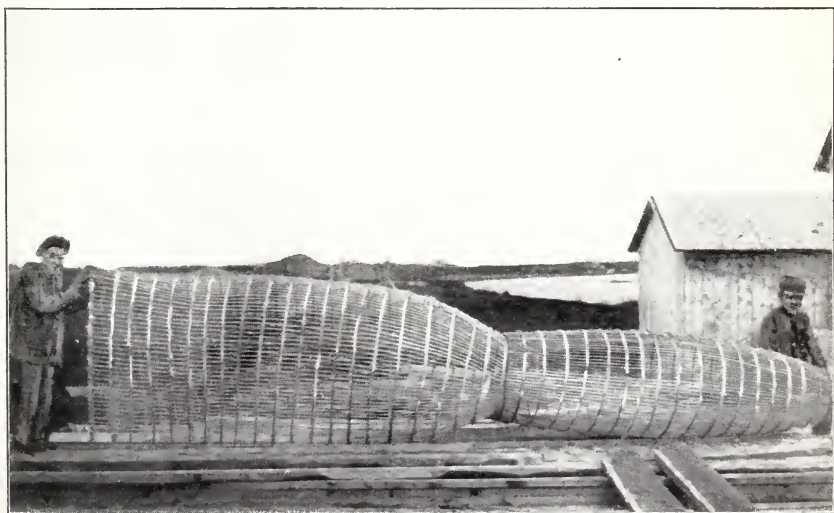


THE MORAVIAN MISSION AT OUGAVIG, ALASKA.





THE OLD METHOD OF SAWING LOGS.



NATIVES' FISH TRAPS.





THE MORAVIAN MISSIONARIES ON THE KUSKOKWIM.



FORT ST. MICHAEL, ALASKA, *January 22, 1899.*

SIR: I have the honor to inform you that on or about February 15 I wish to send a party of five or six soldiers to Golovin Bay.

As transportation is quite limited, I would like to secure reindeer transportation for the party and a limited amount of supplies.

Many irregularities exist in the vicinity of Golovin Bay and Cape Nome, and it is quite important that this detachment should be sent. Therefore I trust that whoever is in charge of the station will offer me all assistance possible.

In your report to the authorities at Washington due credit will be given the station for whatever it may do in the matter.

Let me know at the very first opportunity if this transportation will be furnished. It will be kept no longer than is necessary.

Upon hearing from you, I will let you know when to have the deer and sleds here.

Very respectfully, your obedient servant,

E. S. WALKER

First Lieutenant, Eighth Infantry, Commanding Post.

Dr. F. H. GAMBELL,

Eaton Reindeer Station, Alaska.

FORT ST. MICHAEL, ALASKA, *January 28, 1899.*

SIR: In connection with my letter of the 22d instant, I have the honor to suggest that if possible you send the deer and sleds so as to reach here a few days before February 15. The party could then possibly take advantage of good weather and make the start when it is favorable. I would like to send one officer and five men. None of them can drive, but they could ride on trail sleds and will give all possible assistance, so that probably two drivers from the station would be sufficient.

Also, I would like to know if you can fit them out with bacon, beans, flour, and hard bread at the station. If so, it will save transportation from here to Unalaklik. A receipt will be given for stores so furnished, and they will be replaced from stores now on hand here.

Let me hear from you at the first opportunity. I would like to hear by February 5, even if you find it necessary to send a messenger. His expenses would be paid here.

When you write let me know what stores, if any, you can furnish.

Very respectfully, your obedient servant,

E. S. WALKER,

First Lieutenant, Eighth Infantry, Commanding Post.

Dr. F. H. GAMBELL,

Eaton Reindeer Station, Alaska.

FORT ST. MICHAEL, ALASKA, *February 7, 1899.*

SIR: Your ready cooperation in the effort to send troops to Golovin Bay is much appreciated.

It is possible that the party will not leave here until the 15th. The condition of the weather will partly determine that. At any rate the deer will have an opportunity to rest and fill up on moss for two or three days while here.

We would like to get the following articles from your station, viz, 180 pounds bacon, 100 pounds flour, 150 pounds hard bread, 36 pounds beans, and 36 pounds sugar.

From here the men will take sleeping bags, clothing, cooking utensils, and other camping outfit—probably about 75 pounds per man.

Very respectfully, your obedient servant,

E. S. WALKER,

First Lieutenant, Eighth Infantry, Commanding Post.

Dr. F. H. GAMBELL,

Eaton Reindeer Station, Alaska.

FORT ST. MICHAEL, ALASKA, *February 15, 1899.*

SIR: The reindeer sent by you reached here on Saturday the 11th instant. I had expected to start as soon as they arrived, and had made preparations to leave on yesterday. However, by reason of the illness of Lieutenant Walker, I am compelled to postpone doing so.

The exact time of my departure will, of course, depend on Lieutenant Walker's condition. The probability is, however, that I shall reach your station about the end of next week with five soldiers.

In regard to supplies, I understand that you will be able to furnish me with the articles needed, as indicated in Lieutenant Walker's letter to you of the 7th instant.

Very respectfully, your obedient servant,

OLIVER L. SPAULDING, Jr.,

Second Lieutenant, Third Artillery.

Dr. F. H. GAMBELL,

Eaton Reindeer Station, Alaska.

CORRESPONDENCE WITH REFERENCE TO REINDEER FOR THE YUKON VALLEY MAIL ROUTE.

SEATTLE, WASH., *July 26, 1898.*

MY DEAR SIR: This being the first opportunity I have had to send you word directly from Seattle concerning your proposition to sublet, I have to inform you that the proposal as made to Mr. Emerson by

you is acceptable to me; that is, I agree to sublet the contract for the service between St. Michael and Weare, Alaska, as let to me by the United States Government, and pay you the sum of \$12,000 for performing such service during the months of October, November, December, January, February, March, April, and May, you to furnish everything and to stand your pro rata of fines and penalties that may be levied by the Department, which I think, however, will be small, for they are undoubtedly beginning to appreciate the difficulties of working in that country.

The final contract we will draw and sign when I meet you at St. Michael, about the middle of August or later. I will find you somewhere on the river between now and the 1st of October. However, you had better give Dr. Jackson a power of attorney to act for you in case by some mishap I should miss you.

Can you not undertake the service between Circle City and Weare for two trips a month? If you can do it, prepare for it and we will make that a separate contract. For such service I will give you the sum of \$15,000 for the same eight months as the lower-river contract runs for. I notified you of the above through the Victoria office, thinking it might reach St. Michael sooner by a British vessel, but do not know whether it has done so.

You understand, I am depending on you for the lower-river service and am not taking any supplies from here for that route; therefore, I hope you will make prompt and ample preparations for it.

I am, yours, respectfully,

P. C. RICHARDSON.

MR. WILLIAM A. KJELLMANN,
St. Michael, Alaska.

ST. MICHAEL, *July 28, 1898.*

DEAR SIR: You will remember that in our interviews at Seattle concerning carrying the mail next winter you and Mr. Emerson wished Mr. Kjellmann to sublet the whole route from St. Michael to Dawson, giving you one-third the contract price, but that Mr. Kjellmann was only willing to sublet the route from St. Michael to Weare. I have now found a reliable party who will sublet the portion between Weare and Dawson. It is Mr. N. V. Hendricks, who has several stores on the Yukon and will make his headquarters at Weare. He was formerly at Anvik, where he and Picketts had a store and ran a sawmill. Mr. Hendricks has been placed in charge of the Episcopal herd of reindeer, and is, I think, an energetic and reliable young man. I have no hesitation in commending him to you, and saying that I think you will make more money by this arrangement than by running it yourself.

It will also leave you more free to run the mail and express business between Dawson and Juneau.

I go with the *Del Norte* to-morrow, coasting across to Siberia. Wishing you all possible success, I remain,

Yours, truly,

SHELDON JACKSON.

Mr. P. C. RICHARDSON,
Seattle, Wash.

ST. MICHAEL, ALASKA, *September 24, 1898.*

DEAR SIR: I inclose letters to Capt. E. E. Crockett and Dr. Dahl, both of which you may read to save copying. I am much disappointed in not finding some one here to represent you. After arrival here it was impossible for me to get your people over here in time to go up the river. I have told Dahl to take at least 10 of the best men. If you can spare them and think they can make the trip without too great trouble, send 30 of them. Dr. Dahl and Captain Crockett must see that they are kept busy building cabins, cutting wood, or carrying mail, as the case may be. In case it is running too much risk to send 30 this fall, send 10 of the best men and the remainder in the spring, so that they will be on the ground in the spring before ice breaks up. This would be the safe plan, perhaps. There will be no trouble about pay of the men, for I have at last secured the cooperation of wealthy Victoria parties, who have already put up \$50,000 and are able and ready to put up more.

I will return to Seattle to-morrow and come in over the pass, arriving at Rampart in March or April.

In absence of anything definite from you, I have been compelled to sublet for this next year to parties here the route between this point and Weare. Get at least 10 men to Crockett at earliest possible date, for he is depending on them.

Yours, etc.,

P. C. RICHARDSON.

WILLIAM A. KJELLMANN,
Unalaklik, Alaska.

ST. MICHAEL, ALASKA, *September 24, 1898.*

DEAR SIR: This will be handed to you by Dr. Dahl, who has with him a number of Laplanders, whom you are to use in carrying mail, building cabins, and cutting wood. I want good cabins about every 30 miles between Weare and Circle. They should be 16 by 28 inside, and 9 feet in the clear. It will be hard to build during winter, but they can get out the timber, hew it, get roof poles, and have every-

thing ready to put together in May and June, when the snow leaves the moss. You can use them for cutting cord wood for sale in the spring; or if there is need of laborers in working about Rampart, you can use them and collect for their wages, for I have them hired by the year. It may be that they will be short of help from Circle up; if so, send them Lapps. When I left Seattle, Winston was to look after that, but I do not know how well he has succeeded.

Do all you can to keep the mails moving regularly, and keep the Lapps busily employed.

Yours, etc.,

P. C. RICHARDSON.

Capt. E. E. CROCKETT,

Weare or Rampart City, Alaska.

ST. MICHAEL, ALASKA, *September 25, 1898.*

DEAR SIR: You may send to Captain Crockett all the men you can spare and as many as you think can make the trip conveniently.

Please start them out immediately, unless you think it inadvisable.

Yours, truly,

P. C. RICHARDSON.

WM. A. KJELLMANN,

Unalaklik, Alaska.

ST. MICHAEL, ALASKA, *September 25, 1898.*

DEAR SIR: You will please let Mr. Lyng have the two men you intended to use in carrying the mail by packing between Nulato and Andreafski.

Owing to failure to make connection with you, I have been compelled to arrange for service through Postmaster Lyng.

Yours, truly,

P. C. RICHARDSON.

WM. A. KJELLMANN,

Unalaklik, Alaska.

ST. MICHAEL, ALASKA, *September 28, 1896.*

Inclosed please find a letter from P. C. Richardson, which speaks for itself. Under his contract the mail should be carried by Andreafski and Anvil, so you will please put on the route between these and Nulato some of your men, as Richardson mentions in his letter. Mr. Engelstad and myself have taken the contract to carry between here and Nome via Unalaklik and Nulato. Mr. Richardson himself

will be here again next summer, and he will then pay you personally for the expense of carrying from Andreafski to Nulato. This should be one round trip once a month. You could have one or two Lapps stationed at either end of the route, and they could meet half way and exchange the mail; thereby each side would only have about 200 miles to travel, and it would be a monthly service. I hope to see you in November sometime, and shall try to come over then. The mail should commence October 1, 1898.

Yours, very truly,

R. T. LYG.

WM. A. KJELLMANN,

Unalaklik, Alaska.

EATON, ALASKA, *October 3, 1898.*

DEAR SIR: Inclosed please find all vouchers and other paper that you left, all signed.

I also inclose a copy of a letter from P. C. Richardson, dated July 26, which I wrote about last time, but think I forgot to send you the copy. Furthermore, I inclose 3 copies of letters from P. C. Richardson, dated St. Michael, September 24. All this will explain itself, and what I have to say about it is that I have written Mr. Richardson to-day preparing him to stand the expenditures in making arrangement in accordance with his letter of July 26. It has not been decided yet whether Lapps will be sent or not, as I will wait until the parties who bring this mail to St. Michael return, and see if any new instructions arrive from you or other arrangement has been made. The Lapps will, however, not be sent until I am satisfied that Mr. Richardson has sufficient provision up the river, so we don't have to feed the people up there at heavy expense besides paying their salaries. Mr. Dahl says he can not undertake to bring the party up to Weare or Rampart without funds or other subsistence, and wrote Richardson accordingly. Inclosed also find an acceptance of terms from the Catholic Mission at Nulato, and 100 head of deer will be sent there in the fall. I have also, after further consideration, decided to bring Rev. Prevost's herd from Golovin Bay and send it as far as Nulato, together with the Catholic's herd, and notify Mr. Hendricks to such effect.

Rumors say that the bacon has arrived at St. Michael, and some of it will be brought here with the whaleboat this time. If the Lapps are not sent to Weare, I will use them in some work or another that will be an income and of value to the station; or if none other way is seen, I will send away all those whom we do not need. We will need some little things from St. Michael, which I will exchange for goods which we have plenty of. The herd is doing well; we have only one case of hoof-rot, and the deer has been brought to the station for treatment.

Mr. Lyng, the postmaster at St. Michael, is to carry the mail from St. Michael to Weare, but I do not think there will be many chances to get mail out during the winter.

I have also signed some vouchers in case you need them. Kindly send my salary to my wife.

Very respectfully, yours,

WM. A. KJELLMANN.

Dr. SHELDON JACKSON,

Washington, D. C.

CORRESPONDENCE WITH REFERENCE TO REINDEER FOR VALDES
AND CIRCLE CITY MAIL ROUTE.

SEATTLE, WASH., *May 5, 1899.*

SIR: The undersigned has contracted to carry the United States mail from Valdes to Circle City, in Alaska, for a period of three years.

The object of this is to ask if it would be possible for me to secure eight of the reindeer now in the neighborhood of Circle City, from your Department, to make the experiment of carrying mail in the winter time in this manner.

Will you kindly give this your immediate attention, as in a few days I shall send my men into the country to prepare for the winter, and if it is possible to obtain any reindeer, I would like to send a man through to Circle to take possession of them.

Very faithfully, yours,

RICHARD CHILCOTT.

The SECRETARY OF WAR.

Washington, D. C.

[First indorsement.]

WAR DEPARTMENT, *May 11, 1899.*

Respectfully referred to the honorable the Secretary of the Interior, and the writer so informed.

G. D. MEIKLEJOHN.

Assistant Secretary of War

[Second indorsement.]

DEPARTMENT OF THE INTERIOR.

May 13, 1899.

Respectfully referred to the Commissioner of Education for report as to what source, in his judgment, it may be practicable for writer to procure the desired reindeer in Alaska, with approximate estimate as to cost per head.

THOS. RYAN,

Acting Secretary.

WAR DEPARTMENT,
Washington, May 11, 1899.

SIR: Acknowledging the receipt of your letter of the 5th instant, asking if it is possible for you to secure in connection with your contract for carrying the United States Mail from Valdes to Circle City, Alaska, eight of the reindeer now in the neighborhood of Circle City, I beg to inform you that your letter has been this day referred to the Department of the Interior, to which the subject-matter now pertains.

Very respectfully,

G. D. MEIKLEJOHN,
Assistant Secretary of War.

MR. RICHARD CHILCOTT,
Seattle, Wash.

DEPARTMENT OF THE INTERIOR.

BUREAU OF EDUCATION,
Washington, D. C., May 15, 1899.

MY DEAR DR. JACKSON: I inclose herewith, for your information and for such action as may be possible, a copy of a letter from Mr. Richard Chilcott, of Seattle, asking if it would be possible for him to secure eight of the reindeer now in the neighborhood of Circle City in order to use them in carrying the United States mails from Valdes to Circle City in the winter time.

Perhaps it will be possible for you to see Mr. Chilcott in Seattle and make arrangements with him before you leave for the north.

Very respectfully, yours,

W. T. HARRIS, *Commissioner.*

DR. SHELDON JACKSON,
Occidental Hotel, Seattle, Wash.

SEATTLE, WASH., *May 20, 1899.*

MY DEAR SIR: A Mr. Chilcott, of Seattle, has taken the mail contract from Prince William Sound to Circle City, and is arranging with me to take a few of the reindeer and some Lapps for winter work. His foreman on the route and the other employees will all be Norwegians. He is only talking of eight head of the deer for a route 500 miles long, but I will try to show him the need of a larger number; and if arrangements are finally consummated between us I will give him an order on Mr. Redmyer to turn over a sufficient number of deer. The Lapps, when he wants them, can be sent up from St. Michael, as Mr. Chilcott is interested in a line of steamers running up the Yukon.

The Government is determined to have the reindeer returned to Mr. Lopp and Charley, and what we fail in securing in Siberia will probably either be taken from the herd at Point Barrow or Eaton Station. As I may need you very much when I reach Unalaklik, early in July,

it will not be safe for you to go up the river to Circle City. Can you not write Mr. Redmyer so explicitly that he will know what to do?

The North American Transportation and Trading Company will take 30 head of reindeer from me whenever you are able to send the men to take care of them. I will try and get Mr. Chilcott to take at least 20 head for his use. The balance can be pastured in the neighborhood of Circle City until we can dispose of them. It hardly seems worth while to drive them down to the coast. If the Episcopalians had got their herd at the mouth of the Tanana, it might have been well to have driven them there; but you will probably know better what to do than I.

We now expect to leave the middle of next week and go to Kamchatka, with a short stop at Unalaska, and hope to get around to St. Michael and Unalaklik early in July.

Keep track of the Lapps and Norwegians, so that I can readily find them and pay them off and secure their receipts.

Very truly, yours,

SHELDON JACKSON.

United States General Agent of Education in Alaska.

Mr. WILLIAM A. KJELLMANN.

Eaton P. O., via St. Michael, Alaska.

SEATTLE, WASH., May 17, 1899.

DEAR SIR: Regarding our conversation with reference to procuring reindeer for carrying mails, we will furnish you a letter from the First National Bank of Seattle, agreeing to pay \$125 per head for any reindeer that may be delivered to Andrew Holman and on presentation of his receipt.

Faithfully, yours,

R. CHILCOTT.

Dr. SHELDON JACKSON, *City.*

FIRST NATIONAL BANK OF SEATTLE.

Seattle, Wash., May 25, 1899.

DEAR SIR: We are informed by our friends, Messrs. Simpson & Co., of this city, that they may desire to purchase from you through their agent, Andrew Holman, at Circle City, Alaska, some reindeer. We will say that we will guarantee the payment of Holman's drafts on Simpson & Co., drawn on them in care of this bank, for the amount of \$125 for each head of reindeer delivered to him by you, the number, however, not to exceed ten.

Very truly,

L. TURNER, *Cashier.*

Dr. SHELDON JACKSON, *City.*

SEATTLE, WASH., *May 25, 1899.*

SIR: Mr. P. C. Richardson, mail contractor, has offered to take this letter to Circle City. He wishes to negotiate with you for the purchase of some reindeer for mail transportation. You are authorized to let him have as many as he wishes, to be paid for by him on the spot, at \$125 each. You can deposit the money with the North American Transportation and Trading Company, and take their receipt for the same.

If they should wish you to take the oversight of their work, you are at liberty to do so, but I would like to have you and the men in your charge care for the Government reindeer that are not delivered to Mr. Richardson until such a time as they can be further disposed of.

The agent of Mr. Chilcott, who is the mail contractor from Circle City to Valdez, will also wish some reindeer. When you find out how many Lapps will be needed by the two mail companies and by the North American Transportation and Trading Company, write Mr. Kjellman to send them up to you. His address will be Eaton, via St. Michael.

Trusting that you have rested from your hard trip, I remain,

Very truly, yours,

SHELDON JACKSON,

United States General Agent of Education in Alaska.

MR. HEDLEY E. REDMYER,

Circle City, Alaska.

SEATTLE, WASH., *May 25, 1899*

SIR: Mr. Andrew Holman, agent of Messrs. Simpson & Co., of Seattle (who have the mail contract between Circle City and Valdez), desires to buy ten or less reindeer. He will furnish you, in payment of same, a draft on Simpson & Co. for \$125 for each head of reindeer delivered to him by you, not to exceed ten in number.

You will, at once, mail Mr. Holman's draft to me, care of commanding officer military camp, St. Michael, Alaska. If there is a registry office at St. Michael, you will register the letter.

Very truly, yours,

SHELDON JACKSON,

United States General Agent of Education in Alaska.

MR. HEDLEY E. REDMYER,

Circle City, Alaska.

CORRESPONDENCE WITH REFERENCE TO REINDEER TRANSPORTATION
OF PROVISIONS TO NOME.

NORTH AMERICAN TRANSPORTATION AND
TRADING COMPANY, MERCHANTS AND CARRIERS,

Healy, Alaska, January 9, 1899.

DEAR SIR: I would like it very much if you could send down reindeer and deer sleds sufficient to take about 800 pounds of provisions

up to Cape Nome. If it is possible for you to do this I will appreciate it very much and will settle with you for the same. Mr. Karlsen will explain to you fully what I desire. With best wishes for yourself, I am,

Yours, respectfully,

L. B. SHEPHERD.

Dr. F. H. GAMBELL,
Eaton Reindeer Station, Alaska.

NORTH AMERICAN TRANSPORTATION AND
TRADING COMPANY, MERCHANTS AND CARRIERS,
Healy, Alaska, January 21, 1899.

DEAR SIR: I have loaded the deer and I send a memorandum of the bill of goods, which I have forwarded per your reindeer to Cape Nome, consisting of 1,175 pounds, for which I accept your offer of 20 cents per pound delivered at Cape Nome. These goods are sent to Mr. Dahl and you can give your natives such instructions as you may desire to carry out the programme. I have requested 200 pounds of flour from Mr. Dexter, which I would like to have the Lapps pick up when they arrive there. I also gave Mr. Dexter the liberty of taking a little bacon, rice, and oatmeal, probably 100 pounds in all, and they can replace it with the flour; you will have 100 pounds extra to haul from there up. I should like to have loaded on more if the teams could have taken it. If this first trip proves satisfactory to all concerned, I presume I can give you a much larger load if you desire to haul later in the season.

I shall probably be at Unalaklik on or about the 1st of March. I should like to see you, and by that time we will understand probably what can be done in the way of freighting.

Yours truly,

L. B. SHEPHERD.

Agent North American Transportation and Trading Company.

Dr. F. H. GAMBELL,
Eaton Reindeer Station, Alaska.

ALASKA COMMERCIAL COMPANY, YUKON DISTRICT,
St. Michael, Alaska, February 6, 1899.

DEAR SIR: I understand from Mr. Henderson that you have quite a number of deer in the herd that can be used for freighting purposes, and if such be the case and you care to entertain a proposition for carrying freight between here and Cape Nome, then please let me know as soon as possible the rates at which you could carry not less than 3 tons and not more than 10 tons, said freight to leave here not later

than March 5, earlier if convenient, same to be delivered on a lot staked in the name of Alaska Commercial Company, at the mouth of Snake River, in the Cape Nome district.

Also, please let me know your rates for delivery of this freight at Golovin, should I choose to have same left there. Your early consideration of this matter will much oblige

Yours, very truly,

R. T. LYNG,

Agent Alaska Commercial Company.

Dr. GAMBELL, *Eaton Station.*

P. S.—On the 3d of January I sent a letter to Mr. Kjellmann in regard to this matter, but have to date received no answer.

NORTH AMERICAN TRANSPORTATION AND
TRADING COMPANY, MERCHANTS AND CARRIERS,

Healy, Alaska, February 8, 1899.

DEAR SIR: I would like for you to take up for us, if you can possibly do so, about 2,000 or 3,000 pounds more freight to Cape Nome. I wish you would let me know at your very earliest convenience. In fact, I would like to get up still more than that if I possibly could this season. I expect to pass through Unalaklik the latter part of this month, and I should like to see you there and talk with you regarding this freighting. If you can take some more up for us please let me know at as early a date as possible, for if you should conclude to take some it would make a little difference in my calculations in going up to Golovin Bay.

Yours truly,

L. B. SHEPHERD,

Agent North American Transportation and Trading Company.

Dr. F. H. GAMBELL,

Superintendent Government Reindeer Station,

Eaton Station, Alaska.

NORTH AMERICAN TRANSPORTATION AND
TRADING COMPANY, MERCHANTS AND CARRIERS,

Healy, Alaska, February 12, 1899.

DEAR SIR: I am sending up 300 pounds of grub as far as Unalaklik in Mr. Karlsen's charge. I wish that you would take this stuff and forward it to Cape Nome by reindeer and also some other goods, which have been left there all winter, marked for Mr. Dolan, who is one of my prospectors up there. If it is possible, I would like to have you forward these as early as you can do so.

I would like to get 2,000 pounds more provisions up from down here to Cape Nome, and if you think it is possible for you to send rein-

deer down at any time this spring I wish you would do so. Please advise me if you think it will be possible for you to freight the goods up there.

Yours truly,

L. B. SHEPHERD.

Dr. F. H. GAMBELL,

Superintendent Reindeer Station, Eaton, Alaska.

NORTH AMERICAN TRANSPORTATION AND
TRADING COMPANY, MERCHANTS AND CARRIERS,

Healy, Alaska, March 12, 1899.

DEAR SIR: We are sending you the 300 pounds of rolled oats, the 3 stoves, and the balance in bacon, as per your letter.

We have no native berries of any kind, nor have we had any. Trusting this will be satisfactory, we remain,

Yours, very truly,

L. B. SHEPHERD.

Dr. F. H. GAMBELL,

Superintendent United States Reindeer Station, Eaton, Alaska.

REPORT OF MR. HANK SUMMERS, SECRETARY OF ALASKA PIONEER
ASSOCIATION, ON REINDEER.

[From the Sitka Alaskan, October 28, 1899.]

Mr. Hank Summers, for fifteen years a resident of northern Alaska, was a guest of the officers of the *Bear* on his way to Seattle, from which place he will go East for the winter on both business and pleasure. Mr. Summers is well known in Alaska, especially in the northern portion, and has spent his time there in prospecting, mining, transportation, and in the employ of the commercial companies and Government. When seen by an Alaskan reporter Mr. Summers very willingly consented to be interviewed.

When asked what he thought of the reindeer experiment, he said:

The reindeer are the salvation of that northern country. I have used all kinds of animals that could be gotten into that country; but I will never use anything else hereafter but reindeer. They are just the proper animal for our use, and the Government did wisely when it acted on the suggestion of Dr. Sheldon Jackson and secured the reindeer. They are breeding quite rapidly and find an abundance of food. This food is a white moss that grows in a cold, barren country where there is no other vegetation, and not in a wooded country like southeastern Alaska. In fact they would not do very well in this part of the Territory.

"How do the natives take to the reindeer?" the reporter inquired.

They are more than delighted with them; and why should they not be? They furnish them with the best mode of conveyance they have ever had on land. They furnish them with milk—a luxury they have never had before. The flesh keeps

them from starving, while the hides furnish them with clothes. And they know how to handle them, also, being much more expert than the Lapps. In fact I would not have anyone else to handle them for me, and hire no one but natives. Yes, I can not say too much in praise of the reindeer. They are a decided success.

Such an account of the reindeer was a great surprise to the reporter, and he mentioned that, without being conversant with the facts in the matter, all the papers in Alaska, with the exception of the Alaskan, had scored Dr. Jackson and the Government for bringing the reindeer here, and Governor Brady for favoring the plan, and that one grand jury had gone so far out of its way as to endeavor to besmirch the character of Dr. Jackson for his work in securing them, and denounced the experiment as a willful waste of public money.

"They simply do not know what they are talking about," said Mr. Summers. "They are talking at random. I have been mining and packing along the Yukon, the Bering Sea, Kotzebue Sound, and in the Arctic circle for fifteen years, and have never found anything so useful for packing, hauling, or for food as the reindeer. They are a godsend to the country, and anyone who says differently simply does not know what he is talking about. Won't you come and have an 'eye opener?'"

"No; thank you," said the reporter. "your information has been considerable of an eye opener. I had a faint idea that the grand jury knew something about reindeer, but I was evidently mistaken."

Mr. Summers certainly knows whereof he speaks, and such testimony should put to shame the people who have been harping about something of which they were entirely ignorant. Mr. Summers is not a missionary, nor a Government official, but made the above statement of his own free will in the course of a casual conversation.

ADVERTISEMENT FOR MAIL SERVICE IN ALASKA.

TO KOTZEBUE SOUND AND GOLOVIN BAY.

POST-OFFICE DEPARTMENT,
Washington, D. C., April 5, 1899.

Sealed proposals will be received at the contract office, Post-Office Department, until 4 p. m. April 24, 1899, for carrying letter mail only from St. Michael by Unalaklik (n. o.), Eaton Reindeer Station (n. o.), and head of Norton Bay (n. o.) to Kotzebue (proposed office at the mission on Kotzebue Sound), Alaska, about 460 miles, and back, three round trips, with branch from head of Norton Bay (n. o.) to Golovin Bay (proposed office at mission on Golovin Bay), Alaska, about 160 miles, and back, three round trips, in connection with mail on main line, from December 1, 1899, to May 31, 1900; carrier to leave St. Michael about December 1, 1899, February 1, 1900, and April 1, 1900;

schedule time each way on main line not to exceed thirty days. Bids must state the rate per round trip.

Bond required with bid, \$6,000.

The contractor for this route will be required to provide such dog teams, reindeer, drivers, carriers, boats, supplies, and equipment of all kinds as will insure the regular performance of the service.

This advertisement is subject to the postal laws and regulations, and to the conditions for the last general advertisement for Alaska, dated September 15, 1897, as far as applicable thereto.

Each bid with bond executed by bidder and two or more sureties, oath of sureties as to real estate, and certificate of postmaster as to sufficiency of sureties, to be submitted on the form required under said general advertisement. The accepted bidder will be required to execute a contract in form prescribed by, and with sureties satisfactory to, the Postmaster-General.

All proposals must be in sealed envelopes marked "Proposals for service, St. Michael to Kotzebue, Alaska," and addressed to the Second Assistant Postmaster-General, Washington, D. C.

Decisions announced on or before May 1, 1899.

Post-offices will probably be established at Eaton Reindeer Station, Kotzebue, and Golovin Bay.

CH. EMORY SMITH,
Postmaster-General.

CORRESPONDENCE WITH REGARD TO HERD OF REINDEER FOR EPISCOPAL MISSION.

ST. MICHAEL, ALASKA, *July 22, 1893.*

SIR: I have the honor to acknowledge the receipt of your letter of the 21st, with reference to your taking charge of the herd of reindeer belonging to St. James Mission, the Rev. J. L. Prevost in charge.

In reply, permit me to write that on the part of the Government I see no objections to your doing so, provided you assume the same obligations that were assumed by Mr. Prevost and carry out the letter and spirit of the purpose for which said deer were loaned by the Government—to wit, the introduction of domestic reindeer among the natives and the training of some of their young men to the management and care of the deer. When a native after an apprenticeship of five years learns the business he is to be given 18 female and 2 buck deer as a starter for his private herd. Any time after five years from the date of the original loan the Government can call for 50 head.

I hope you may be able to make satisfactory arrangements with Mr. Prevost, as I judge you will give more time to the development of the herd than the missionaries will be able to do.

If you complete your arrangements, you will have Bishop Rowe or Mr. Prevost write a letter to Mr. William A. Kjellmann asking him to drive the herd up to Weare and turn them over to your care.

Also arrange with Mr. Kjellmann for the Lapps you may need. Until the deer loaned by the Government are returned, the herd will be open to inspection by the Government agent.

Truly, yours,

SHELDON JACKSON,

United States General Agent of Education in Alaska.

Mr. N. V. HENDRICKS.

Anvik, Alaska.

NORTHERN LIGHT, YUKON RIVER, *August 9, 1898.*

Dr. SHELDON JACKSON: I am heartily in favor of making some arrangements with Mr. Hendricks with reference to the care of the reindeer apportioned to St. James Missions.

I am writing to Mr. Kjellmann as well.

Very sincerely, yours,

JULES L. PREVOST.

KARLTOG, *August 17, 1898.*

DEAR MR. KJELLMANN: According to the inclosed and further instructions which you will receive from Dr. Jackson, I wish you would please bring the herd of deer to Wearè, at mouth of Tanana. Am on my way to St. Michael, and hope to see you and Dr. Jackson again.

Yours, in haste,

N. V. HENDRICKS.

HOTEL FORT GET THERE,

St. Michaels Island, Alaska, September 1, 1898.

DEAR SIR: I had hoped to arrive here in time to see Dr. Jackson again before he left for the States, but I was too late. I inclose you the letter he gave me while here, which explains in regard to the reindeer. I send you a letter by the surveying party from Karltoq. This letter was authority from Mr. Prevost to turn the herd over to me. I inclose also herewith a letter from Mr. Prevost to Dr. Jackson, both being of the same import. I think it was Dr. Jackson's intention to write you on this subject. If he has been unable to do so, I hope these letters will be satisfactory enough for me to get the deer. I hope Dr. Jackson has not failed to advise you, as the arrangements were that you would bring the herd to Weare along with your deer, and that I



GIRLS' BUILDING, HOLY CROSS MISSION, SISTERS OF SAINT ANN, YUKON RIVER.

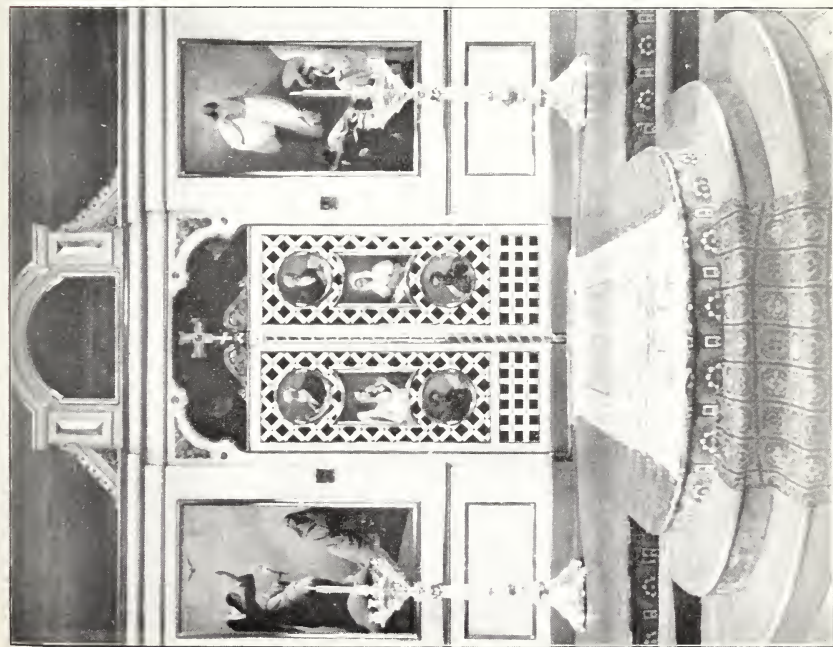
Photo by Mrs. Alice Palmer Henderson.



EPISCOPAL MISSION CHURCH, ANVIK, ALASKA.

Photo by Mrs. Alice Palmer Henderson.





CHANCEL RUSSIAN-GREEK CHURCH, KOGMUTE, ALASKA.
Photo by Mrs. Alice Palmer Henderson.



ESKIMO CHILD, ALASKA.



should have some of the Lapps. I would like a man with a family to take care of the herd and a single man to make trips with me. That is my idea, at any rate, to have someone with the herd and someone who can be absent. I will be glad to leave it with you to furnish me with what you think I need in the way of help. And if you have or can have made enough sleds and harness to give me a start, so I will not have to wait to make these things when the deer are brought over, I will pay for them and much appreciate the favor. I hope to do some business up around Minook this winter with the deer. Will you have anything to send up?

Am sorry I can not see you and have a talk. Will hope to see you on your first trip to the Yukon. I will probably be at Weare when you arrive there.

With best wishes,

Yours, truly,

N. V. HENDRICKS,
Weare, Alaska.

Mr. WM. A. KJELLMANN,

Superintendent Reindeer Station, Unalaklik, Alaska.

CORRESPONDENCE WITH REGARD TO THE HERD OF REINDEER FOR
THE ROMAN CATHOLICS.

THE MISSION, NULATO, *March 5, 1899.*

DEAR SIR: In reply to your inquiry letter dated February 27, received yesterday, I may state that there is no real ground for the rumor that we contemplate leaving Nulato and locating our mission somewhere else, so little, indeed, that we are actually erecting a new building close to the old ones, which is intended as a girls' school for next winter. So if this were the only objection to the driving up the herd this season I think it could be most easily disposed of. But there may be other difficulties in your way, about which I had better go by your decision than you by mine, as you know much more about reindeer, while I have never seen but one, in the London Zoological Garden. As I informed Mr. Kjellmann last September, the location we contemplated for the herd was at a point near the village on the Shageluk Slough, where we have a good log house and where an abundance of deer moss is to be had. On closer examination I find this point to be much nearer Holy Cross Mission than Nulato, so much so that were you to drive the reindeer to that place I almost think it would be advisable to go by way of Anvik Portage and secure a guide in or about Kose-refski. I also think the Lapps would have to depend on Holy Cross Mission for direction and supplies. There used to be one of our

fathers from Holy Cross wintering at that spot, but the place has not been inhabited this winter, if I am well informed. On the other hand, I am told that at about 6 miles northwest of Nulato there exists a place where plenty of deer moss can be had; but no house nor accommodation of any kind has been provided, and the limited resources of which I can dispose do not allow me to hope that I could make up for it presently. Things being so, it might be safer to wait till next year, when I hope preparations will have been made to meet the first requirements of the situation, unless you should think it advisable to follow another course, in which case I will do my best to make the undertaking a success. I shall attend to the furtherance of the mail, as directed, with all possible diligence, by the first safe means that will be available, and shall be happy to oblige you in any other matter when possible.

Yours, truly,

JULIUS JETTÉ, S. J.

REV. SHELDON JACKSON,

St. Michael, Alaska.

ST. MICHAEL, ALASKA, *September 31, 1899.*

DEAR SIR: I have signed the voucher which you gave me. I think you will find my others in with the report which I gave you, as I have not found them at the station. I remember that you stated that you would inclose some of my papers in the same envelope. Are there any objections to letting the mission at Unalaklik have any provisions which they are in need of and of which we have an oversupply?

I was never given a list of the names of the ones with whom I was to contract for services for the coming year, but am confident that I can select the best men for the work needed. Part of the men I remember; most of them, I think. If you have an original list I would be glad to receive a copy of it.

If I am needed next year, and you can not employ a suitable man to fill my place, that the work may prosper, I might stay. I would prefer being put in charge of the men and women who will be sent back home if you so see fit. If your plans are otherwise, all well and good.

The men all seem satisfied and are willing to work. The herders who came in report that the deer are in excellent condition.

I will see that the deer are transported from Golovin Bay to Charley. I have written to the Catholics at Nulato, and will try and get them their deer.

I am well. We have made a necessary trip to St. Michael, and will return to-morrow.

Trusting that God may bless his work here this winter, I remain,
yours,

FRANCIS H. GAMBELL.

Dr. SHELDON JACKSON.

General Agent of Education in Alaska, Washington, D. C.

PETITION FOR INTRODUCTION OF REINDEER INTO KOTZEBUE SOUND
REGION.

We, the undersigned, having spent the winter (1898-99) in Alaska in the Kotzebue Sound region, respectfully petition the honorable officials of the Department of the Interior, Alaska division, to speedily introduce domestic reindeer into this region, believing that if rightly managed they will relieve to a great extent the winter sufferings of the destitute natives of this region.

I. Thompson, F. J. McCan, D. K. Jones, Jno. Wynler, Cy. Mulkey, Wm. Hunt, L. A. Calderwood, Louis M. Prindle, E. R. Jordan, J. E. Edwards, W. S. McKaig, G. H. Rabders, John Bauer, L. Bernstein, F. W. Clark, F. Janner, M. Storm, Eddie Koebler, Alex Campbell, J. B. Brown, J. P. Ellsworth, James Williamson, Chris. Shummi, James A. Steele, James H. Kilner, C. A. F. Swete, Milton L. Attin, P. H. Watt, M. Premo, F. B. Porter, E. S. Ingraham, Ralph J. Sheafe, C. H. Loomis, C. F. Francis, J. B. Nielsen, E. F. Graham, Jos. A. Jury, W. H. Sturtevant, E. C. Messenger, W. B. Buckley, A. J. Casey, Mrs. M. E. Smith, Mrs. S. A. Pepper, Mrs. J. A. Brown, Homer S. De Long, J. Fred Gordon, S. A. Pepper, J. L. Evans, Chas. F. Webb, A. Weston, Wm. McCarty, E. J. Jaquith, Geo. W. Berry, P. C. Thein, Paul Pierson, Herbert F. Bailey, Geo. W. Close.

APPLICATIONS FOR REINDEER.

NOME, ALASKA, *August 2, 1899.*

DEAR SIR: Is there any show for a private person to go over to Siberia to purchase reindeer, or will the mission be permitted to invest its money or gold dust in reindeer? I myself have a few thousand, and those with me, in all fifteen thousand, which we wish to invest in deer for the benefit of the mission and schools among the natives of Alaska.

I should like very much to go over this fall if we could procure trading goods for the same. Michael would go with me if you thought advisable. If you call, and the steamer *Bear* remains long enough,

please send a note with a boy up to No. 9, Anvil Creek, and I will come down. I should like to see you in regard to this.

If you have procured the mail contract it will be all right with that, as my partner will remain at Golovin all winter and do the traveling, and we now expect a man up to take Mr. Anderson's place at Golovin.

Please let me hear from you soon.

Respectfully,

D. J. ELLIOTT.

Dr. JACKSON.

P. S.—Is there no way of putting a check to all this moss burning? Soon there will be no feeding ground for the deer.

D. J. E.

THE ALASKA EXPLORATION COMPANY,
UNDER MANAGEMENT OF H. LIEBES & Co.,
Anvil City Station, August 31, 1899.

SIR: Understanding that you are arranging to purchase reindeer in large numbers in Siberia, we would respectfully request you to purchase about \$20,000 worth for us at the same rate that the Government secures them for.

Very truly, yours,

D. J. ELLIOTT.

JOHN BRYNTESON.

Dr. SHELDON JACKSON,

General Agent of Education in Alaska.

EATON, ALASKA, *March 29, 1898.*

DEAR SIR: We, the undersigned Laplanders and former employees of Teller and Eaton Station for five years, do hereby apply for a loan of 100 or more reindeer on the same condition as is usual for the Eskimos and Missions of Alaska. We intend to establish a herd between Goweerok, or Eaton River, and Golovin Bay, and are willing to let the Government at any time supervise the herd in general and inspect the same.

Respectfully, yours,

JOHAN SPEINSEN TORNENSIS,
MIKKEL JOFSEF NAKKILA,

With Wm. A. Kjellmann.

Dr. SHELDON JACKSON,

Washington, D. C.

CORRESPONDENCE WITH HEDLEY E. REDMYER, IN CHARGE OF HERD
OF REINDEER NEAR CIRCLE CITY, ALASKA.CIRCLE CITY, *March 8, 1899.*

DEAR SIR: I have just heard to-night that there is a man going out to-morrow, via Dawson. As I have not had time to make out my reports, I thought I would send you a few lines. We arrived here February 28, all well, also the reindeer, but not as many as we all thought at the beginning of our journey. Above Dawson the wolves visited us, also 100 miles below, so our herd has come down to the small number of 122 reindeer, which the Lapps are now herding at a good pasture near by. The deer are in a fair condition, but of course having been constantly driven and not having had much time to feed properly they need the rest of the winter to gain what they have lost; men are also used up and need rest. I received your letter of August 31 from Mr. Crane, but I submit that I can not fulfill the order, as I can not let the three men go with the 30 deer. It would only leave me two herders with the remaining herd. It would seem that Mr. Kjellmann must have known that I could not take care of the deer with only two men.

I will write down to Mr. Kjellmann and ask him to come up here on the first boat this spring. I think my letter can reach him sooner than yours can. At the same time your instructions, via Dawson, may reach him here. In regard to the price, \$125, it seemed to me rather cheap. If I had had only a few deer left after Mr. Crane got his deer I would have sold at that price, but to sell two or three at that price is of no use; so I will not do anything until a new order is received from you in Dawson. I might have sold quite a few; one offered \$300 for a deer, but as I did not know anything about my authority to sell, I told them the deer were not for sale. Mr. Emil Kjelsberg notified me on December 15, 1898, that six months from that date he wanted to resign from the Government employ. Will write more, also send in my report as soon as I have it ready.

Yours, very truly,

HEDLEY E. REDMYER,

*In Charge of United States Government Reindeer Herd,**Circle City.*

HON. SHELDON JACKSON,

*Washington, D. C.*CIRCLE CITY, *March 31, 1899.*

DEAR SIR: I thought of sending you my daybook and a final report, but as I am not certain whether the mail will arrive safely or not, I concluded to wait until it can be sent by boat. I have now bought

provisions from the North American Transportation and Trading Company and some from the Alaska Commercial Company, enough to last until September 10 for 5 men. Mr. Kjelsberg will leave the Government employ June 15, and I want to leave the employ July 1. The reason why I bought so much provision is that I want to take it out to the hills, about 10 miles, which is the only place where the herd can be properly herded during the hot summer months. After the last of April all the snow will be gone and the river and creeks flooded so it would make it impossible to get any provisions out there. According to my own experience in packing with reindeer, I know they would not be able to do any work before the last of August. Judge Crane has a log building at the foot of the mountain, about 60 miles from here, which I have rented to have it as a headquarters and store for the provisions. The herd will be kept 10 or 15 miles farther back on those mountains. The Lapps will commence to take out the supplies the 3d of April.

I made a trip with Captain Richardson, the commanding officer of the United States troops, out to those hills and to the mines. He wanted to try the reindeer. In coming back I wanted to give the deer a show of covering a few miles; we made 54 miles in a little over ten hours' time; the Captain seemed to be delighted with the deer, but you know the deer are not in good condition to make any record, being driven so much. Lieutenant McManus, one of the officers, has been begging me to go out with him to the Tanana River on an exploring trip, in order to connect the route to Cooks Inlet, which Lieutenant Castner was exploring last summer. I have consented to go with him. We will take 12 deer, 1 Lapp, 1 Indian, and rations for thirty days, and intend to start out April 3. This will be a trip outside of my orders, and will perhaps bring no extra pay, but I have done so much extra work for nothing that I might as well do this too. I believe the route to Cooks Inlet might prove to be a much better route as a mail route, especially if they intend to use reindeer for transportation of the same, as far as I have found out in regard to the lay of the country; and I believe if the Government employed the driver and reindeer and did not contract for it the mail could be carried to the satisfaction of everybody and with less expense. As it is now, the mail was brought only once to Circle City the whole winter. If you would like to know my plans for operating the same, I would cheerfully tell from an experienced standpoint. I will send a statement of all that I have bought.

Hoping to hear from you very soon, I remain,

Yours, very truly,

HEDLEY E. REDMYER,
Circle City, Alaska.

Hon. SHELDON JACKSON,
Washington, D. C.

CIRCLE CITY, *June 27, 1899.*

DEAR SIR: Under your letter of introduction of April 6 we are authorized to furnish goods to H. E. Redmyer only under urgent necessity. We have extended every courtesy to Mr. Redmyer, and have supplied the Laplanders with tobacco and similar articles of everyday use, as well as to Mr. Redmyer, which we understand is outside of the Government reindeer account. No mention of this being made in yours, we are writing for information as to the reimbursement of these, and also as to what extent we may allow them to run.

We have not taken over the 30 reindeer yet, as Mr. Redmyer could not let us have the three Laplanders called for in the contract; but we would like to have the men as soon as possible.

Capt. J. J. Healy will probably be at St. Michael in a few days, and we should deem it a favor for you to consult with him on this matter.

Respectfully, yours,

J. E. CRANE,

*Agent North American Transportation and
Trading Company, Circle City, Alaska.*

REV. SHELDON JACKSON,

St. Michael, Alaska.

ST. MICHAEL, *July 29, 1899.*

SIR: You will return at once to Circle City, Alaska, and upon your arrival at that place will turn over to Mr. John E. Crane, agent of the North American Transportation and Trading Company, 30 head of reindeer, and take a receipt for the same in duplicate. One of the receipts you will mail to me, care of the military camp at St. Michael, and the other you will mail to me at Washington, D. C.

You will also turn over to the company three of the Lapps now in your employ, and see that the company makes a written agreement, in duplicate, with them that will be satisfactory to the company and to the Lapps, the said Lapps to have one copy of the agreement. If Mr. Holman, agent of Mr. Chilcott, who has the mail contract from Valdez to Circle City, shall apply to you at Circle City while the deer are still in your possession, you can give him 10 head and take a receipt for the same in duplicate, said receipts to be sent as above—one to me at St. Michael and one to me at Washington. Whoever applies to you as Mr. Chilcott's agent must show his credentials and prove that he is the man that he represents himself to be.

If the agent of Mr. P. C. Richardson applies for deer, let him have all that he will pay cash for at the rate of \$125 per head. You will deposit the money for the same with the North American Transportation and Trading Company, to be forwarded to me at Washington.

The balance of the deer you will turn over to Mr. N. V. Hendricks or his agent, and take his receipt for the same in duplicate, said receipts to be forwarded to me at St. Michael and Washington. You will also let Mr. Hendricks or his agent have two Lapp herders, a satisfactory agreement, in duplicate, being made between Mr. Hendricks and the Lapps. You will also sell the supplies, harness, sleds, etc., at fair rates. If you can not procure fair rates for the rifles, etc., you will bring them with you down the river. After closing up matters as expeditiously as possible, you will return down the river and report for duty to whomever may be in charge of Eaton Reindeer Station. If you are caught in the ice coming down, you can make a portage from Nulato to Eaton Station.

Wishing you success, I remain, truly, yours,

SHELDON JACKSON,
General Agent, etc.

MR. HEDLEY E. REDMYER.

CIRCLE CITY, *August 19, 1899.*

DEAR SIR: I arrived here August 15 on the steamer *Hannah*. I left Mr. Hendricks at Anvik, who did not send a man as his agent, but only sent a note to Mr. Prevost, at Rampart City, telling him to hire a man up there as his agent. I delivered the note myself to Mr. Prevost, and told him also to see that the man was sent up as soon as possible; he promised to do so, and said that he would send one on the first boat. After I came up here, I decided to wait until this man arrived before going up to the station. Two steamers have already passed since from Rampart City, but the man has not shown up yet. I can not wait much longer down here for him, so if he does not come before the 21st of this month, I am going up to the station, or where our herd is, and wait till he comes. I was much surprised in coming here to learn that the North American Transportation and Trading Company refused to take the deer. Mr. Crane (who I supposed wrote to you) told me their firm or company did not know anything about it, and that he had no authority to receive the deer. I have decided to turn all the deer over to Mr. Hendricks or his agents, and tried to make him hire three men instead of two, and have the two other men sent down to the Eaton Station; if he refuses to do that, what shall I do? Well, if it is left for me to decide, I will manage it all right, and without any loss to the Government. I suppose if I have to wait a couple of weeks for Mr. Hendricks or his agent, I will not be able to come down to Eaton Station, and will not run the risk of getting into the ice, and possibly be laid up in a place where it will probably be impossible to get out. Dr. Slagster, the army surgeon, who has been

attending the Lapps whom I left in his care, has performed several difficult operations. I would very much recommend that his bill be paid.

Hoping to hear from you very soon, I remain,

Yours, truly,

HEDLEY E. REDMYER.

Dr. SHELDON JACKSON,

St. Michael, Alaska.

SEATTLE, WASH., *May 19, 1899.*

DEAR SIR: I have the honor to inclose you a bill of \$25.65 of Messrs. Hewitt & McDonald, for supplies furnished H. E. Redmyer and party of Lapps in charge of overland expedition of reindeer.

This is one of similar bills which I have sent to the Department, since leaving Washington to return to Alaska and settle up the accounts of the Lapps with the War Department to the time of the expiration of their contract.

You remember that by the terms of the contract these men were to be paid out of the fund for the relief of the people in the mining regions of Alaska, up to January 31, 1899.

The rations furnished by the War Department were only sufficient to last them until about October 1, 1899, when it was supposed they would reach the neighborhood of Circle City and be able to secure more. The expedition was expected to go through an unknown country, from the ocean north in southeast Alaska to Circle City, in the Yukon Valley. In attempting to do it they got lost in the mountains, and instead of reaching Circle City by the 1st of October they did not actually get there until the last of February, 1899. They ran out of provisions and clothes, suffered many hardships, and were compelled to purchase provisions at the trading posts which they reached, paying four and five prices for the same. But it was either that or starvation.

I learn that since leaving Washington a bill, purchased under similar circumstances from the Alaska Commercial Company's store, Dawson, was refused by the War Department and sent back to the Interior Department. But the bill was for provisions for these Lapps under contract with the War Department, and is properly chargeable to the fund for the relief of people in the Yukon Valley. If I were present in Washington I think I could make all these bills, as they come in, plain and satisfactory to the Department, and I trust that as soon as convenient they may be audited and paid out of the Alaska fund.

I expect to sail on the revenue cutter *Bear* in a few days. While passing through Portland, as you requested, I called at the First National Bank to receive any suggestions they had to make and take any

blanks that they might wish to send to the commanding officer at St. Michael, who has the payment of the salary of the Lapps.

Congratulating you on the near approach of peace in the Philippine Islands, I remain,

Very respectfully, yours,

SHELDON JACKSON.

The SECRETARY OF WAR,

Washington, D. C.

CANADIANS AGITATING THE INTRODUCTION OF REINDEER INTO CANADA.

HALIFAX, N. S., *January 31, 1899.*

SIR: I have just received the Report of the Commissioner of Education of the United States, and note with unabated interest the magnificent progress you are making in Alaska in education. For years the first glance at the Report has been to the index for Alaska. There can be no longer any doubt as to the feasibility of making the reindeer both the horse and ox of our great northern land, and if I understand your work and its significance it is now possible to explore, settle, and reside anywhere on the rim of the Arctic Ocean from the Alaska line to the mouth of the Nelson River in comparative comfort and safety. Your work is just as valuable to Canada as though you were an officer of the Canadian Government; and I now write with two objects in view—the introduction of the reindeer into Canada, and the condition and wants of the Eskimo and Indian tribes north of 60 degrees in Canada.

As to the first point—the introduction of the reindeer into Canada: How ought we to proceed and where and at what point had we best make the attempt to introduce them? Dr. MacKay, our superintendent of education, tells me the moss on which they feed grows in abundance through our whole northland; and I hear Macoun, our Dominion botanist, says the reindeer could live well as far south as Ottawa. If this is so, we ought through the reindeer to open up our great northern country, so that trading posts and mission stations are no longer places of banishment for six months of the year and that the Indian might have a chance for his life. If your experience in Alaska can be repeated in Canada, there is nothing to prevent communications all winter with Fort McPherson, some 500 miles from one of your stations, Fort Good Hope, Fort Norman, Fort Simpson, Coronation Gulf, the Great Fish River, and the Hudson Bay. I only write you on this subject because you know the condition and value of Canada north of 60 degrees north latitude. I am firmly convinced that where there is one reason for introducing the reindeer into Alaska

there are ten for trying the experiment in Canada. You can get to Alaska all winter from the south, but with us in Canada all that country above 60 degrees is hermetically sealed up after November 1. (See the report on the Great Mackenzie Valley to Parliament in 1888.) All our men speak of "reindeer" in it, but they must mean "barren-ground caribou." I do not know of any reindeer in Canada, and do not think our barren-ground caribou could be trained like those from Lapland and Siberia.

For above a year I have been trying to ascertain the number and condition of the Eskimos from 140 to 90 degrees—that is, from Alaska to Hudson Bay—and the condition of the interior inhabitants to 60. Are there any schools, missions, etc., in all that tract?

The Moravians, Roman Catholics, etc., have missions in Labrador; the Church of England at the mouth of the Nelson River; but what is there on what I suppose is 3,000 miles of coast? The Roman Catholic missions are at all the forts, but if there are any Eskimos on our coast line I am not aware that there is a single school or mission from Alaska to the Hudson Bay, and not a mission out of the Mackenzie Valley in all the great country to the east and bounded by the sixtieth degree of north latitude. I am aware of all the Roman Catholic schools or missions at all the forts on the Mackenzie from Good Hope to Athabasca. In this tract of country there must be at various seasons of the year at least 25,000 people, most of them uncivilized heathens. The attempts the Roman Catholics have made in Canada to Christianize the Indians count for very little; in fact, if they have had no more success in the north with the Indian than they have in Nova Scotia with the Micmac they have not improved him, but have only created prejudices which hinder him from taking up with other agencies.

I have been thinking of the matter for a couple of years and it begins to be a burden on me that we may have in all that territory thousands of Eskimo who can look forward to nothing but raw fish and an icehouse. We must extend the agencies of civilization to our native tribes. It ill becomes us to send thousands of dollars to India and China when we have a population right at our door fighting an Arctic winter in an icehouse, without any of the consolations of religion and civilization.

I have been thinking of asking the Moravians to extend their missions right around our coast, provided you tell me we have the people, and think the Moravians are among the best and most successful workers with the Indian and Eskimo. I am a poor man, but have any amount of enthusiasm for raising money in a cause which touches my sympathies.

I would take it as a great favor if you could enlighten me on these matters, and believe me I write you because it seems to me that you

have had greater success in your work than anyone I know of, and if I had my way I would gladly enlarge your field to superintend all the work in North America north of 60 degrees.

Very sincerely, yours,

J. T. BULMER.

Rev. SHELDON JACKSON,

Washington, D. C.

HALIFAX, N. S., *February 13, 1899.*

SIR: I have received and read with great interest and profit the reports of your department relating to the introduction of the reindeer into Alaska. I am quite convinced that we must make a similar move in Canada, and the only wonder is that it has not been done before. But for politics I believe it would, for here, as in the United States, everybody is out of breath trying to beg something from the Government. I am to-day conferring with the Government on the North American status, and other persons of prominence as to taking steps for a public meeting, and will immediately press the matter on the attention of the minister of the department of the interior, so that we can get a grant at the approaching session of Parliament.

Again thanking you for your kindness, believe me to be, sir,

Your obedient servant,

J. T. BULMER.

The COMMISSIONER OF EDUCATION.

HALIFAX, NOVA SCOTIA, *April 17, 1899.*

SIR: I got the report for 1898 a few weeks ago and your letter a few days ago. Respecting the first, allow me to say that nothing issues from the press more interesting to me than your report. Particularly am I glad to see that you have such a fine herd at Point Barrow. The success you will have with that herd will determine the possibilities of our coast line from the northwest boundary to Chesterfield Inlet, some 1,500 miles. I have no doubt but that the Eskimos and Indians north of 60° would take most kindly to the introduction of the reindeer, and that those great stretches of rich pasture land can only be utilized in one way—by the reindeer. Macoun tells me that the great barren land pastures are the richest in the world. He says no one of Canadian or United States prairie is to be compared as a pasture with the “barren ground”—during July, August, and September. We must fill that country with the hardy northern moss and give them the reindeer to work with and live on. Evidently you have been very fortunate in getting a good reliable fellow like your acting superintendent. I wish we could get you to come into service of Canada.

We have a whole continent in which things might be started right if we had some inspector-general, like yourself, to take charge of an estate as large as Russia in Europe, or, for that matter, in Asia, too.
 * * * I need not tell you that in any scheme I enter into, you will, if living, be the father confessor. A politician should intuitively know whom to distrust, but a constructive administrator should know whom to rely on, and I think I have made no mistake in picking you out of all the people in the United States as the one man born to lead in matters of this kind. Again thanking you for your great favors,

Believe me to be, sir, very sincerely, yours,

J. T. BULMER.

Rev. Dr. JACKSON.

P. S.—Could you let us have 100 from the Point Barrow herd to drive down to the Hudson Bay fort, a few miles above the delta?

ARRANGEMENT FOR TRANSPORTATION OF SUPPLIES TO THE REIN- DEER STATIONS.

SAN FRANCISCO, CAL., *May 6, 1899.*

SIR: I understand that you are about sending a vessel to Bering Sea. The Government and mission societies who have stations on the North Bering Sea coast would like a rate for the carrying and landing of their supplies. The supplies are being prepared and packed by Messrs. S. Foster & Co., of your city, and are approximately as follows: Twenty-five tons for Eaton Reindeer Station; 8 tons for St. Lawrence Island; 25 tons for Mr. William A. Kjellman and two parties of Lapps who are mining in the new district between Cape Nome and Point Rodney. The freight on the last 25 tons, of course, will be paid by the individuals there, but probably they will give you an order on their salaries of last year. They were all in the employ of the Government during the past year, and unless they have drawn largely from the Government supplies, have considerable money due them. If I reach the station before you do I will ascertain this; if you get there before I do, you had better look into the matter, and satisfy yourself that they have money coming to them from the Government.

Then there are 25 tons for the Swedish Evangelical Mission at Unalaklik, and 25 tons for the same mission at Golovin Bay. The person to whom you should send the bill for this 50 tons of freight for the Swedish missions is the Rev. D. Nyvall, North Park College, Station X, Chicago.

The lumber for St. Lawrence Island, 6,000 feet, should be charged to the Board of Home Missions of the Presbyterian Church, H. C. Olin, treasurer, 156 Fifth avenue, New York City.

There will also be a couple of tons for Dr. Lerrigo, whom you will probably find at Unalaklik when you get there. He is in the employ of the Government, and you can safely take an order from him on his salary.

The above does not include an order of Mr. W. T. Lopp, at Cape Prince of Wales.

To sum up the matter, what will you deliver freight for on shore for the Government and the mission stations and individuals formerly connected with the Government, per ton, ship measurement, at Unalaklik, Norton Sound, Golovin Bay, Cape Nome neighborhood, St. Lawrence Island, and Cape Prince of Wales?

Very respectfully, yours,

SHELDON JACKSON,

United States General Agent of Education in Alaska.

Capt. B. COGAN,

44 East Street, San Francisco.

SAN FRANCISCO, *May 6, 1899.*

SIR: In reply to your communication of May 6, inquiring concerning freight to Bering Sea ports, I will carry and land on shore freight for the several mission stations, including Mr. Kjellman and the Lapps at Unalaklik, Golovin Bay, Point Rodney, Cape Prince of Wales, and St. Lawrence Island, for \$10 per ton, ship measurement.

Very truly, yours,

B. COGAN.

DR. SHELDON JACKSON,

United States General Agent of Education in Alaska.

MAY 6, 1899.

SIR: I have the honor to report that I have this day arranged with Capt. B. Cogan, of the bark *Alaska*, who will take the freight for the reindeer stations and mission societies along the northern coast of Bering Sea for the sum of \$10 a ton, ship measurement.

I have also arranged with J. S. Kimball Co., 22 Market street, San Francisco, to deliver female reindeer at Cape Prince of Wales, Port Clarence, or Cape Nome, to replace those taken by the Government for the whalers, at the rate of \$25 per head.

I have also met a firm in San Francisco—Roth, Blum & Co.—who have dealings with Petropaulofski, and from them will take letters of introduction that may be of assistance when I get to the Siberian side. The freight will leave San Francisco about the 20th of May.

Very respectfully, yours,

SHELDON JACKSON.

Hon. W. T. HARRIS, LL. D.,

Commissioner of Education, Washington, D. C.

CHARLES E. CHARD ALLOWED THE USE OF BUILDINGS AT TELLER REINDEER STATION.

PORT CLARENCE, ALASKA, *July 15, 1899.*

DEAR SIR: I take this liberty in writing you asking for the use of a house at Teller Reindeer Station for the winter 1899, as I intend to stop, and have no house of my own. If you could oblige me in doing this I will look after the other buildings to my best ability.

I am, yours, very truly,

CHARLES E. CHARD.

Dr. JACKSON.

TELLER REINDEER STATION, *July 15, 1899.*

Mr. CHARLES E. CHARD.

Port Clarence, Alaska.

SIR: In response to your application of this date for permission to occupy one of the Government buildings at this station, I have the honor to reply that you can have the free use of the log building known as the schoolhouse for the fiscal year ending June 30, 1900, on the following conditions:

1. That you will act as guardian of all the Government buildings at the station. That you will give due diligence that the lumber is not stolen from them and that they are not otherwise injured; that you will preserve them from being occupied by anyone except Carmoka and her family and any other who may bring you a written authorization from myself. If Wocksock, Sekeoglook Tautook, Dunnak, or (Charley) Antisarlook (reindeer men) should need temporary accommodations in a vacant cabin you can allow them to have them.

2. That no liquor is to be sold or given away on the premises.

Very truly, yours,

SHELDON JACKSON,

United States General Agent of Education in Alaska.

The large frame building is to be fastened up and not occupied by anyone.

I hereby accept the above conditions.

CHARLES E. CHARD.

REPORTS ON REINDEER FOOD FROM UNITED STATES CONSULS.

DEPARTMENT OF STATE.

Washington, April 7, 1899.

SIR: Referring to your letter of February 3 last, in regard to the feeding of reindeer in the northern part of Europe, I have the honor.

by direction of the Secretary of State, to inclose for your information a copy of a dispatch on the subject from our vice-consul at Helsingfors, Russia.

I have the honor to be, sir, your obedient servant,

THOS. W. CRIDLER,
Third Assistant Secretary.

THE SECRETARY OF THE INTERIOR.

HELSINGFORS, *March 31, 1899.*

SIR: I beg to acknowledge the receipt of the Department's dispatch of the 9th of February, and have made a thorough investigation regarding the feeding of reindeer in our country. I have found that when the reindeer can not have moss they get hay, together with club moss of pine tree (Latin: *Usnea*), and also hay and rye bread.

I am, sir, your obedient servant,

VICTOR EK,
Vice and Acting Consul.

HON. THOS. W. CRIDLER,

Assistant Secretary of State, Washington, D. C.

DEPARTMENT OF STATE,

Washington, April 10, 1899.

SIR: I inclose herewith a report written by Edward D. Winslow, esq., consul-general of the United States at Stockholm, in regard to the feeding of reindeer in northern Europe, which he has made in compliance with instructions of the Department of State, which were sent to him at the instance of the Department of the Interior.

Very respectfully,

MICHAEL SCANLAN,
Acting Chief Bureau of Foreign Commerce.

EDWARD M. DAWSON, Esq.,

Chief Clerk Department of the Interior, Washington, D. C.

After a very thorough canvass of the matter in regard to the feeding of the reindeer in Sweden, I am able to state that the only food given the animals is the "Reindeer Moss" (*Cenomyce rangiferina* or *Cladonia rangiferina*).

It is a lichen highly prized by the Laps. It is found most abundantly in the arctic regions, almost as luxurious on the bare rocks as in the soil. It covers extensive tracts in Lapland, making the landscape in the summer look like a field of snow. It grows also in the pine forests. This moss consists of a much-branched, erect, cylindrical tubular thul-

lus, with small perforations in the axils. It grows to a height of three inches, and the ground looks like one mass of it, so thickly intertwined are the branches.

The reindeer are never fed nor attended, but take care of themselves. They reach the moss in the winter by using the horns and feet in scraping away the deep snow. Both sexes have antlers.

The domesticated reindeer is never as large as those in the wild state. Again, the domesticated reindeer of Siberia is much larger than those of Lapland.

The reindeer is gregarious—partially migratory—its migrations, however, not being regulated by climate, but by the facility of obtaining food.

The chief wealth of the Laplander is the reindeer, and in summer they drive them to the mountains and to the lower tracts in the winter. No store of food is laid by, they being expected to thrive much better, as they do, by being permitted to roam in droves and obtain their own subsistence.

This moss is capable of being used for human food, and was recommended for this purpose in time of scarcity by an edict of Gustavus III. of Sweden. The taste is pleasant, attended with a slight pungency or acidity.

Attempts have been made at different times in Sweden to raise the reindeer on hay, grass, roots, vegetables, grain, etc., but the animal has never thrived.

EDWARD D. WINSLOW,
Consul-General.

DEPARTMENT OF STATE,
Washington, March 23, 1899.

SIR: Referring to your letter of the 3d ultimo in regard to the feeding of reindeer in northern Europe, I have the honor, by direction of the Secretary of State, to inclose for your information a copy of a dispatch from the consul-general at St. Petersburg, Russia, in which he reports that while reindeer eat moss in winter they prefer grass in summer, and that it is easy to accustom them to eat hay.

I have the honor to be, sir, your obedient servant,

THOS. W. CRIDLER,
Third Assistant Secretary.

THE SECRETARY OF THE INTERIOR.

CONSULATE-GENERAL OF THE UNITED STATES,
St. Petersburg, March 3, 1899.

SIR: In reply to Department dispatch No. 45 of the 9th ultimo, concerning the feeding of reindeer, I have to state that I have been

informed by the chief of the Department of Agriculture, Prince W. I. Massalski, that "reindeer feed in winter on moss, and in summer they prefer juicy grass, especially *Polygonum Bistorta*, *Manyanthes*,' and all other juicy grasses. However, it is easy to accustom them to eat hay."

I am, sir, your obedient servant,

W. R. HOLLOWAY,
Consul-General.

Hon. DAVID J. HILL,
Assistant Secretary of State, Washington, D. C.

REINDEER.

[Extract from a sermon by T. De Witt Talmage, D. D., from Psalms 42:1.]

My friends, that is one reason why I like the Bible so much—its allusions are so true to nature. Its partridges are real partridges, its ostriches real ostriches, and its reindeer real reindeer. I do not wonder that this antlered glory of the text makes the hunter's eye sparkle and his cheek glow and his respiration quicken. To say nothing of its usefulness, although it is the most useful of all game, its flesh delicious, its skin turned into human apparel, its sinews fashioned into bowstrings, its antlers putting handles on cutlery, and the shavings of its horn used as a pungent restorative, the name taken from the hart and called hartshorn. But putting aside its usefulness, this enchanting creature seems made out of gracefulness and elasticity. What an eye, with a liquid brightness as if gathered up from a hundred lakes at sunset! The horns, a coronal branching into every possible curve, and after it seems complete ascending into other projections of exquisiteness, a tree of polished bone, uplifted in pride, or swung down for awful combat. The hart is velocity embodied. Timidity impersonated. The enchantment of the woods. Its eye lustrous in life and pathetic in death. The splendid animal a complete rhythm of muscle, and bone, and color, and attitude, and locomotion, whether couched in the grass among the shadows, or a living bolt shot through the forest, or turning at bay to attack the hounds, or rearing for its last fall under the buckshot of the trapper. It is a splendid appearance that the painter's pencil fails to sketch, and only a hunter's dream on a pillow of hemlock at the foot of St. Regis is able to picture.

SUGGESTIONS ON THE PURCHASING OF DOMESTICATED REINDEER IN SIBERIA.

By CONRAD SIEM.

The importance of the introduction of domesticated reindeer into Alaska is appreciated by nobody more than by men who, like myself, have spent years of their life in this Territory. When Mr. Kelly asked me to join him as assistant at the proposed purchasing station in Siberia, I had just returned from Alaska, where for some years I had been engaged as manager of a whaling station.

Naturally I thought that where deer had been bought before deer could be bought again. However, I relied for success on the favorable local conditions, of which we might take advantage. This reliance on favorable local conditions had not been misplaced, for on landing at St. Lawrence Bay we found a certain local situation which in itself had all the elements for success which, but for other contingencies, would have assured a prosperous issue of the enterprise.

It must be almost twenty years ago when a young man at Indian Point had to flee for his life from the village; he had had the misfortune to kill in a drunken brawl a citizen of some standing and influence in that prosperous community. In his hurried flight he took with him his young orphan brother. He found refuge and settled down in the village of Ak-ka-nun, on the north shore of Meehigme. His name was Omitow—or Peter, as rechristened by Captain Healy—and his brother's name is Reuben. Now Peter, though originally of Chowchuan stock, had imbibed a good deal of the commercial thrift of his late home, and being very energetic he soon prospered in his new surroundings. The extremely anarchical and communistic conditions prevailing among the renegade population of these settlements made the acquisition of wealth perilous and well-nigh impossible, but Peter was above the average, resourceful and ambitious, and sought and found a way out. In his many trading trips to the north coast, toward Cape Serdze and Kosehinchin, he learned that he could buy reindeer cheaply from the deer-men there. Experimentally at first he acquired a few, which his young brother herded for him close to his home at Ak-ka-nun. Seeing that the deer got along all right on the

pastures adjacent to the seacoast winter and summer and increased, which had been a doubtful point with him, he bought more. While he himself kept on trading and hunting for seal, etc., his wife and young brother attended to the increasing deer herd. As he was also an exceptionally good and lucky hunter, he seldom had to fall back for food on his live stock. So Peter, within a few years, found himself the owner of a nice herd of reindeer.

His neighbors meanwhile, who at first had ridiculed him, began to envy him. To content them, he proposed to buy deer for them as well. The proposition struck his neighbors as fair. So Peter, collecting their surplus goods, started to carry them along with his own on his northern trips. The common herd grew proportionately more quickly. The joint owners would delegate their young brothers or sons to help to take care of it. Peter, of course, as principal owner, as is the fashion among the deermen in the interior, retained the deciding voice in discussions. When the *Bear* came negotiating for deer, Peter was wide-awake enough to see an opportunity to better himself, and, although some of his associates objected, he took trade goods from her to purchase deer for export. The natives told me that through it he had been able to increase his own herd to quite an extent.

In the meantime Peter had found imitators. Other deer herds sprang up, owned jointly by the natives of the Lorin and Jan Daugar (South head) villages. Small deer owners, too, who had for years herded their few deer in a laborious and dependent position with big deermen in the interior, took note of the easier existence of the coast owner, and, settling in the communes, added their deer to the communal herds, so that by the time we landed at St. Lawrence Bay there were in the vicinity four big deer herds, owned jointly in lots from one to one hundred and more by the inhabitants of the neighboring coast villages. Such communal deer herds, herded by delegated herds-men, we would consider a practical advance in civilization. The big deermen of the near interior had at first objected to this innovation, but the movement had grown too strong before they had quite realized it. To-day they are somewhat inclined to treat the coast owners as being on an equal footing with themselves, and in cases are willing to turn over to them live deer for trade goods. At Whalen there is another large deer herd, in which nearly every inhabitant of that and neighboring villages is said to have stock.

This was the situation we found when we landed on the coast with a large amount of trade goods to establish an export business of reindeer to Alaska. We found a local traffic in deer which, rightly employed, promised success. We found in the hands of progressive coast natives deer herds which had already increased to numbers virtually bigger than the surrounding pastures could support.

That the big deer owners of the interior were radically opposed to selling deer to the white men we soon had to learn. Their queer customs and usages make it an impossibility for a white man to deal with them directly. The coast owners with but few exceptions held themselves aloof, too, at first. Of course, from the man who owned only one to the man who had already become the proud possessor of a hundred deer or more their ambition was to become big deer men. Influenced by our rich stock of trade goods, which appealed to their commercial instinct, we had them soon in line, and they sold to us quite a number of deer. No other arrangement being possible, we made arrangements with two herdsmen of communal herds, Peter and Towaragg, to herd our deer along with the herd in their charge, and, experimenting, we fitted out these and other natives with trade goods for the purchase of more deer for us. Everything seemed to be going along nicely, and all would have been well if we could have retained control.

The first serious setback we received was caused by a local depreciation of our trade goods. In the fall of the year these will work back into the interior, and this, together with the visible supply in the house, all known to be for the purchase of reindeer, naturally tended to raise the local value of these animals. In fact, some of the natives were not able to buy back from the herds in the interior with the goods received from us as many deer as they had given us. This was the cause of a lot of dissatisfaction, and it made our situation very unpleasant for a while among this vindictive people; in time it naturally adjusted itself.

More serious was the objection of the big deer owners against letting the white man own deer in their country. I will cite as a typical case a deer man who was introduced to me by the name of Rittarow. He generally kept his big deer herds in the neighborhood of St. Lawrence Bay, winter and summer, and on him the south and north head natives had often depended for their supplies of deer meat. He had therefore some influence with these. He early proclaimed that the best way to stop the white men from meddling with the internal affairs of Chowchuen land was to assassinate them, and it was not for lack of efforts that he did not succeed. Baffled time and time again by the friendly disposition of some coast natives and our watchfulness, he became enraged and drove his deer herds to the distant mountain ranges between Mechigme and Koliuchin, thereby forcing the coast natives to some extent to fall back on their own deer and our flour for subsistence. Later, to make matters worse, misfortune overtook Rittarow. He got himself and his herds into a region where the snowfall that winter was excessive and the spring blizzards unusually severe; consequently he lost nearly half of his herds by starvation. With some show of right he blamed us for his misfortunes, and threats from him

against us and natives who had befriended us kept coming with ominous frequency.

Factions for and against us had sprung into existence all over the country. These, with the dissensions naturally frequent among this anarchical people, created storm upon storm, of which we seemed to form the center, and which made us wish ourselves well out of the country. We tried by a liberal use of our trade goods to conciliate the population (morally obliged to adopt this course in support of our native friends) and to continue the buying of deer, but every move we made became the cause of renewed howls. It became evident soon that our very presence in the country was antagonistic to success. There were no means by which we could gain control and command the elements of success we had found on our landing. I have read that Charles XII of Sweden used to declare that he could send his boots to preside over his Parliament and have it do his bidding. I believe it; and though it may sound paradoxical, I will go even further and say that his boots were bound to prove themselves more effective with his Parliament than he himself would have been. Why? The answer is simple. Charles XII absent, waging successful war abroad, was an unknown quantity and well worth propitiating. Therefore all the factions in his Kingdom, in the hope of future favors, would vie in doing him service. But Charles XII present would have been quickly forced to take sides, and would soon have had his hands full in quelling internecine troubles.

A certain similarity between this and our position in this country struck me at the time. Present, we would always form a cause of contention. To conciliate everybody was out of the question, even if the use of trade goods to that end would not have been positively detrimental to the buying of deer by putting premiums on dishonesty and rascality. Force, or any show of force, even if our position on foreign territory had not forbidden it, would have quickly brought on a climax and effectively stopped the buying and selling of deer. But absent, and proceeding in the right way, we might have been able to utilize the existing advantageous conditions. As soon as I perceived that the continuance of the deer business would be impossible on present lines, I began to gather information about and to study the character, internal relations, and general conditions of this population, with the object of ascertaining the feasibility of pursuing this undertaking with the help of native agents. I came to the conclusion that if it would be kept up in the right way and with the right means on these lines there would be nothing to prevent making the exportation of reindeer out of this section of Siberia into Alaska beneficial to both countries.

I have had already occasion to state that we found it advisable to make certain experiments for a continuance of the undertaking in that

way. As stated, we turned into the hands of certain natives, who had proven themselves the most reliable and in other respects fitted, the trade goods we had left on hand after paying for deer bought directly, their herding, etc., with the understanding that they should utilize these to procure deer from the interior deer men and increase their own herds with the view of turning them over to us if a continuance of the reindeer business should be desired by the Department.

That you were not able to collect more of the deer might have been brought about by any or all of the following causes: (1) In the latter end of winter and in the spring all traffic in live stock naturally stops in this country, on account of the uncertainty of carrying it through all right. Nobody cares to buy emaciated cattle if he has not the means to feed them. Last winter was said to be an exceptionally hard winter on reindeer in that part of the country. For the trade intrusted to native agents, though it had been in part turned over already to big deer owners in the interior, these had not been able as yet to procure deer. Peter, e. g., had invested most of the trade goods advanced to him in Ogrook hides (big-bearded seal hides), which are always in great demand by the deer men, and which he proposed to exchange for deer in late summer. (2) The deer bought by us were all bought from small coast owners in lots from one to four, though the biggest part in charge of Peter and Towaragg, these would have laid themselves open to crimination in the local point of view by turning them over to you without the consent of every one of the original owners. (3) These natives are very quick to take offense. If, for instance, you showed favors to or seemed to rely on the statements of one John Kimok, a South Head native, who is rather in the habit of pressing forward in dealing with white men, and who has a reputation of being a coward and a liar among the natives, you would thereby have caused a number of natives to become sullen and to hold themselves aloof. A certain tact and knowledge of the individual natives is necessary to successfully deal with them.

Then, too, it is hard to impress it on the native mind that one man is acting for another; of the United States Government, they can, of course, form no conception. As a rule, they mean honestly enough. Numbers of them are sufficiently smart to know a good thing when they see it, and it will be a comparatively easy task to make it to their interest to forward this business to the utmost of their ability. As nearly every coast native of influence has his trade relations with different deer men of the interior or Cape Serdze, a number of native agents in the same locality will not interfere with each other. Rightly handled, the different native agents could be brought to emulate one another in efficiency as purchasers of deer. As to cost, it will prove itself decidedly cheaper than maintaining a purchasing post.

Absolutely necessary for success it is to proceed in a businesslike and systematic way, and to that end I make the following suggestions:

(1) That a number of natives, whom we know to be honest and capable and willing to forward the exportation of reindeer into Alaska, be selected to act as agents for the United States Government to buy deer.

(2) That each of such native agents be provided with a small, substantial frame house, about 10 by 15 feet in size, with good doors and locks, painted and marked as United States reindeer depots. Such houses it would be advisable to have framed in the city, so that they could be quickly put together with screws and as quickly taken in pieces when necessary.

(3) That to such native agents, annually, be intrusted barter goods, sufficient to buy for the United States Government from 50 to 100 deer. As occasion would warrant it, the amount could be increased.

(4) That to every native agent be given as salary about 200 pounds' worth of provisions—flour, bread, sugar, etc.—annually. This would act as an incentive and at the same time will make him more independent of the deer men and of deer meat for a living.

(5) To give such native agents credentials and recommendations to the Russian officials, and, in short, to do whatsoever possible and feasible to make the Siberian population understand that such agents are under special protection.

(6) That a general purchasing agent be appointed, with residence in Port Clarence, Alaska, who should annually collect and ship the deer and distribute trade goods to the native agents. This would keep before their eyes, to some extent, winter and summer, the man to whom they are responsible, and from whom they can get appreciation if efficient.

(7) That it would prove itself to be of advantage if the Alaskan deer were taken away from the Bering Sea coast. Exaggerated reports of their numbers, carried across the Bering Straits by the Eskimo traders, tend to prejudice the deer men against selling more.

(8) In the selection of the barter goods the utmost care should be taken. The agent in Port Clarence should buy as much as possible all such produce as the Eskimo traders annually carry across to Siberia, such as Ogrook hides (big-bearded seal hides), rawhide lines, wood for canoes and sleds, etc., which are always in demand by the deer men. Red fox skins are the best money that can be used for the purchase of deer. A good red fox will buy a deer at a time when nothing else will. These, too, might be purchased by the Government agent in Alaska. To me there seems to be a certain fitness in stocking Alaska with reindeer with the help of Alaskan products.

If the Department should contemplate a continuance of the business on these lines, there are of course a number of details in execution

which would have to be considered. I shall be glad if I can be of help, and will give the names of those Siberian natives who are best in position to forward the undertaking whenever asked to do so. It is obvious that the agency should be intrusted to a man thoroughly conversant with the native character. Tact is as necessary to successful dealing with natives as with other people, and it is the man who knows how and has the patience to look at things with native eyes who makes the successful trader.

A great mortality among the reindeer in this section of Siberia might be made an objection against buying deer here. Without doubt this is caused by an overstocking of the poor pastures here, and a drainage of deer into Alaska will help to obliterate it. This cause is well understood by the Siberian native, and often formed the subject of discussion between some of them and myself. After we had stopped buying deer on account of the tumultuous elements, many deer were offered for sale to us, but we made it an invariable practice to tell them to wait till summer. I will reiterate, in conclusion, that if the undertaking is carried on for a few years on the indicated lines by the United States Government, there will succeed a natural outflow of reindeer from Siberia into Alaska, fed by the numerous deer herds, near and far, all over Siberia.

Respectfully submitted.

CONRAD SIEM.

JANUARY, 1899.

THE ESKIMO ON ST. LAWRENCE ISLAND, ALASKA.

By WILLIAM FURMAN DOTY, *Teacher.*

GEOGRAPHICAL NOTE.

Situated in the extreme northern part of Bering Sea and about 150 miles south of Bering Strait, St. Lawrence Island rises above the sea, the product seemingly of volcanic action in remote ages, presenting to the eye of the navigator who skirts its coast a tortuous line of bays and promontories, with their inevitable accompaniment, the sand spit, with high cliffs for the most part along the shore and mountain peaks in the distant interior. The beach generally is very narrow and steep. There is only one harbor that is perfectly sheltered from the action of the sea. It is at the mouth of a river that drains a large lake and is situated on the southern coast, possibly 20 miles northwest from Cape Chitnam. Vessels can get under shelter, of course, in the lea of many of the capes, and yet in stormy weather would do better by giving the island a wide berth. Some skill is required in making a landing on the beach in a whaleboat or skin canoe, except on very calm days.

The western section of the island, as far as I have observed it and can gather from the reports of the natives, is well supplied with lakes and adjacent marshes, while there are a few ranges of mountains and some peaks. During the summer season a few varieties of flowers, grass, and a marsh berry of two sorts relieve the dreary wastes of shingle near the shore and the otherwise monotonous tundra in the interior. Mosses of several varieties are to be found here, but not in any great quantity; but abound, I am informed, in the eastern half, which is not primarily a lake region, but is mostly given over to mountain peaks. There are five rivers which drain the lake section. One has been already mentioned as flowing southward; another empties near the Southeast Cape, while the other three flow northward. Salmon abound in these streams.

Beyond the vegetation referred to already, there is nothing else; and the temperature, even in the summer time averaging less than 40°. would not warrant the introduction of grain seeds or vegetable tubers. It is needless to state that a tree could not thrive here.

As no survey of this island has yet been made, one can not accurately state its dimensions. I should estimate its surface area, approximately, at 3,000 square miles, as the maximum length is less than 100 miles, measured from northwest to southeast, and probably less than 40 miles on the average in width. Its eastern limit is about longitude $168^{\circ} 57'$ W., and its western extremity is probably longitude $171^{\circ} 50'$ W. Its northern point reaches latitude $63^{\circ} 34'$ N. and its southern point about latitude $62^{\circ} 57'$ N.

There are two villages on the island at present. One is situated at Cape Chibukuk, which, by the way, probably ought to be spelled Seevookuk, to accord more nearly with the native pronunciation, and named now Gambell, in honor of Mr. and Mrs. Vene C. Gambell, who labored here as missionaries during three years, commissioned by our Government and the Presbyterian Board of Home Missions. This village contained in the spring of 1899, according to my census, 313 persons. The other village is about 40 miles south, at Southwest Cape, and contains 24 persons. This village suffered greatly about twenty years ago during a food famine, losing the majority, I think, of its inhabitants, while Seevookuk lost about half of its population. This famine obliterated a large village at Southeast Cape, numbering probably 150 persons, and also four or five smaller settlements on the north shore, one near Cape Kuhuliak and another on Northeast Cape.

The animal life on the island is confined to Eskimo dogs at the villages, arctic fox, an occasional polar bear, with a few mice, while winged creatures are very abundant, especially waterfowl and ravens, with an occasional owl. Insect life appears to be represented solely by the house fly and butterfly, but there may be others to which my attention has not been called. The sea teems with codfish, and affords during the proper season whales (although not many of these), walrus, seals, and whitefish. The sea urchin and kelp cast by the surf upon the shore afford food for the people.

The nearest land is Indian Point, Siberia, which is only 40 miles distant, and suggests the origin of these natives.

The natives on the island are Eskimos. They call themselves "Mas-singa" men—"good" men. The Indian Point and Plover Bay people arrogate the same title to themselves.

ORIGIN OF NATIVES ON ST. LAWRENCE ISLAND.

It is interesting to note the antipathy for the Indian Point natives as a result of long and bitter feuds in the past, when the Siberians nearly exterminated the natives here. This makes the people on St. Lawrence Island unwilling to admit that they sprung from the same stock as their enemies, the Indian Point people. They claim to be of autochthonous origin. The language, I understand, is the same here as at Indian Point and the adjacent village at Plover Bay. It is of

importance to note that an affinity of long standing exists between the natives of this place and those of Plover Bay. It is evidenced during wrestling contests between the natives of Siberia and St. Lawrence Island. When the men of the latter place are exhausted—as they are few in comparison with those of Indian Point—the Plover Bay natives take the side of the St. Lawrence Island natives. Without desiring to lay too great stress upon this affiliation, I am inclined to believe (in view of the dread of the Plover Bay people—who number, probably, about 200—of extermination at the hands of the Indian Point people, who outnumber them more than twice) that formerly the ancestors of these people and those of the St. Lawrence Island natives constituted either one village or adjacent communities, having their common enemy, the Indian Point people, as their near kindred. Family quarrels are bitter, and it is not to be wondered at if one or more families left the Plover Bay region for a more peaceful abode on St. Lawrence Island. Of course, the first people who ventured, in frail skin boats, to cross a strait 40 miles in width, where the currents are strong, and with a prospect of being swamped in a frail canoe or blown hopelessly to the southwest with a vast expanse of water on every hand, must have had rather strong urging from some quarter to run the great risk. I hardly think that mere desire to better their condition—hoping to find more walruses and seals, for instance, on this island—would have exiled a people who were essentially so devoted to their homes.

There is no tradition on St. Lawrence Island, as far as I can discover, of a general exodus from Siberia to this place. The people have a tradition of a first man and a first woman who always lived here and who began the propagation of this race. Its only significance to my mind is that no large number of people came from Siberia to this island at first. One family may have been followed in the course of a few years by others. To this unattractive isolated island only those came who required a place of refuge.

Nor did they find respite long here from their relentless foes. There are traditions of many battles with the Indian Point men who came over here in the summer seasons, accompanied at times, I understand, by their allies, the Deermen from the interior. The natives at this village, Seevookuk, were nearly exterminated. On one or two occasions a man and a woman only were able to escape and preserve a remnant of the original stock. In these contests the Plover Bay men never took any part. Even at the present time, when the Siberians are obliged to desist from ravaging the people here in the presence of a United States Government official, they make the people give them many skins and much whalebone as a sort of tax, promising to remunerate them later, but forgetting the obligation. It may not be amiss to add that our Government ought to terminate this unsatisfac-

tory condition of affairs by making a demand upon the Czar of Russia to prevent these Siberians from further evil doing at this place, or by overtaking them in their fault on American soil, and administering to them sound punishment therefor.

This bitter feud is alone sufficient, I fancy, to account for the origin of the St. Lawrence Island natives.

POLITICAL ORGANIZATION.

The office of chief appears to be merely a nominal one, for it carries with it seemingly no power of leadership or of executive action. The title is conferred upon the man who is the most successful whale hunter. If the chief should fail after his selection to sustain his former reputation, he would soon be relegated to private life again. If a man secures one or more whales during one year he is regarded as "growing bigger," and if his growth continues to excite admiration he has every chance of a speedy election to the chieftaincy. Popularity in a sense, after all, determines the choice, for when a man secures a whale he divides it between himself and his neighbors, retaining no considerable portion of either the meat, blubber, or whalebone. Hence his neighbors have reason to be under obligations to him for his kindness, and make him chief in time if he continues to gratify them by further divisions of his gain with them.

The people claim that long ago before the dreadful famine carried off so many of the inhabitants of the island there was one great and powerful chief over all the natives on the island, residing at Seevookuk. The temper of the people at present is opposed to a chieftaincy possessed of authoritative functions.

The chief, accordingly, is not called on to right the wrongs of any aggrieved person; the latter must attend to his own affairs, calling upon his relatives and near friends, doubtless, to support him, if the matter is an important one. On the whole, I think that the peace of the community is seldom disturbed by very serious broils. There are family antipathies, of course, and bitter words are at times exchanged, but blows are not given. There are two factions here, I believe, one of them affiliated by marriage with the Indian Point natives, and in which a few of the latter figure prominently as disturbers of the peace, for they are given to drinking and concocting intoxicants and to rioting. These factions were two or three years ago on the verge of fighting, but at present appear to respect a truce. It would improve the community, I may say, if our Government extradited the Indian Point faction or two or three of its leaders.

Under a system such as obtains here the teacher is unable to find anyone who has the central authority, and can not rely upon concerted action on the part of the people in case of emergency. This

has its disadvantages at first; but later an official of forceful personality could gradually assume here the real functions of leadership. This would be well.

The organization at the village near South West Cape is apparently patriarchal in character, as the office of chief is vested in a very old man who has retained this dignity for a long time. As there are only a very few people there, no doubt they are all intimately related.

There is no council house at either village; evidently the people do not frequently confer together over topics of a political nature.

POLITICAL ECONOMY AND SOCIOLOGY.

Traders are very influential men among these Eskimos, including the captains of whaling vessels and the few men who devote themselves to trading solely, making annual visits to this island, and especially the teacher in residence at Gambell. Any one who visits these people must be prepared to trade with them or speedily take himself off. Trade is effected by barter. Competition between the whaling captains regulates the prices of articles, influenced also by the market prices in the States, as witnessed this summer by the war tax on tobacco and the increased price on some other goods. Since the rush to Alaska began some coin has been given to the natives by prospectors en route to Kotzebue Sound, who secured water boots from the natives. As I discovered one counterfeit dollar here, I warned the people to refuse to accept money hereafter. A few greenbacks which appeared to be genuine also found their way here lately. I accepted this money in exchange for goods; otherwise it would have been of no commercial value to them.

In general, values do not fluctuate greatly here. Whalebone, ivory, water boots, have a more or less fixed value. The imported articles vary in value only slightly. The decreasing supply of whales, walrus, and seals has doubtless caused a steady advance in value during the past decade; but from season to season the increase is not marked. I have been told that one captain who was the first to visit these people—possibly thirty years ago—was able to take away a vast deal of whalebone for next to nothing in return. The people had no use for the big slabs then and used to throw them away. They saved the bone after they observed the eagerness of the first captain to secure it. The value has steadily increased, of course. At present, considering their remoteness from the States, these natives receive quite a fair remuneration for their goods.

Trade is carried on with the Indian Point natives for deerskins and bear skins, giving ivory and walrus skins and wooden plates and skin canoes in return. In this trading the St. Lawrence Islander is generally worsted, however, for he is compelled to trade against his desire and receives an inadequate article in exchange. After another decade, when the deer have been introduced here and distributed among the

people, these natives will not be obliged to entertain their Siberian cousins longer for the purpose of trade, and then the latter ought to be kept by our Government from further persecuting these people.

Wealth is not evenly distributed among them. Of course some of them are more skillful in hunting, or at all events secure more game, and so have the advantage of their fellows. Some are skillful in carving on ivory, or in making souvenirs of the island from wood, and trade these successfully. Others have inherited property from their parents. Primogeniture holds here to a considerable extent; the house invariably passes, at the death of the father, to the oldest son, and this is the largest possible legacy in view of the scarcity of wood—driftwood (nearly rotten) being found in only small quantities. The richest man owns five houses, four of which he rents to others. The more prosperous natives, numbering about a dozen, possess whaleboats for which they traded bone; they employ their dependent relatives and friends to form their hunting crews, remunerating them for their services.

Eskimo dogs constitute a part of the wealth of every householder, each head of a family requiring at least a half dozen to draw him on a sled to the distant hunting resorts during the winter.

• Rifles, shotguns, ammunition, and fish lines are also essential here, and are to be found in every house.

The problem of economics here is not an abstruse one by any means. One may almost say that it is reduced here to its lowest terms. With the influx of prospectors or with a change of residence on the part of the natives, on account of the decreasing supply of food here, the conditions will of course be materially altered. To one like myself, who has lived among them, the sociological problem is inviting, and perhaps, after all, not so very difficult of solution. The perpetuity of the people, at the least, and their advancement in Christian civilization, at the most, are to be sought after by all who feel a sense of humanity for a threatened race, and who are prompted by philanthropy to rescue them. Dr. Sheldon Jackson's plan of locating a herd of deer upon this island and gradually turning it over to the natives in payment for services in herding, is unquestionably the most important scheme in solving the riddle. If several years must elapse before the natives are permitted to come into possession of the herd, then Government aid in developing the cod fishing or Government trading with the natives (sacrificing profit) may be of service to prevent disaster in times of famine. The natives, if possible, had better be induced to remain on the island and aided here rather than urged or assisted to depart to the mainland of Alaska, where their ignorance of the English tongue and of all or most things that could in competition with white men bring them an adequate recompense would render them hopelessly discouraged.

SOCIAL ORGANIZATION.

The family here is the social unit. In fact, there is no strong tribal organization, and the claims of the "gens" upon any member of the community appear to be far less absorbing and exacting than are those of his family circle. As far as I can observe, the parents are very affectionate and loyal to each other and to their children; the latter appear to be tractable, obedient, and filial. At present the wives appear to have quite the same social rights as their husbands. Formerly, I have been told, a man had the right to trade his wife to another person, even to a stranger. Domestic chastity very generally obtains at the present time. The children are free, seemingly, from vicious practices. Marriage is regarded as the only proper condition for persons who have attained the physical development suitable for that state. The married couples are intensely anxious to have a large family of children. In former times an unproductive wife was bidden to depart at length to her parents' home and support herself. I think that more consideration now is shown to these unfortunate wives, but they do not retain the warm affection of their husbands. The desire for children gives rise to the practice of bigamy. As soon as the first wife is incapable of performing the functions of maternity, a second, usually a young wife, is taken by the husband. This is bad enough, but a worse condition prevails among their Siberian cousins at Indian Point and Plover Bay, where polygamy is rampant and the social status of a woman so low that her husband can ill treat her, abuse her, and sell her to any purchaser. On St. Lawrence Island no man will now strike his wife. However, if she is ill tempered or refuses to work, an older woman, doubtless one who has the unquestioned authority in the matter, administers a few blows with her hand. Moral suasion controls small children, while the father treats a recalcitrant youth after the manner described above in the case of disobedient wives. The children do not "bicker" or fight in the house, but are always apparently on the best of terms.

One can not fail to be impressed with the domestic virtues of these natives, living so happily and purely in family groups. This may be a recent attainment.

PHYSICAL CHARACTERISTICS.

The Massinga men are probably on the average about 5 feet 4 inches in height; not one of them can boast of 6 feet. The women are generally 3 or 4 inches shorter than the men, while the children are correspondingly small. As a rule, the men and older boys are thick-set, full-chested, sinewy, supple, muscular, and capable of enduring a hard, long-continued strain. They have no tendency to obesity; their flesh is solid invariably. The head is rather large in proportion to the

rest of the body, and frequently well shaped. As a rule, the forehead is not high, although broad at the base, and slants backward, while the back part of the head is apparently more strongly developed than the front part. The head does not bulge above the ears, but is inclined rather to be acrocephalic. There are exceptional instances, however, of very finely developed "brain boxes." The eyes are almond shaped, resembling the Mongolian type; they indicate an active, intelligent mind. The nose is quite large, but lacks refinement by reason of the low bridge and the large development at the nostrils. The mouth is large and strong, with strong teeth within. The hands and feet are very small and well formed. The hair on the head is jet black and very thick if the scalp is not diseased. Some men have a very sparse growth on the chin. As a rule, the face is clean shaven and the head is shorn like a monk's, there being only a fringe of hair. The women braid their hair in two plaits. There are various ways of trimming the hair, however, and in some instances a boy or man who is designed for some function connected with "shamanism" seems to wear his hair 3 or 4 inches long or has locks of that length in the back if the rest of the head is shorn.

The complexion ranges from yellow to brown.

ATHLETICS.

Primarily strength and endurance are gained by hunting, which involves paddling or rowing during some seasons and long walks at other times. To supplement these exercises, athletic contests are occasionally held, when the young men wrestle and perform on ropes stretched horizontally between uprights, while the middle-aged men occasionally play "tag" like the children. Ball is played at times, the girls against the boys. No bat is used; the ball is merely tossed. Occasionally the young men take a run to develop their "wind," going about two and one-half miles on a dog trot. Girls and boys try the hop, skip, and jump, and leap over low obstructions. Lifting very heavy stones is also practiced by the strong men.

DISEASES.

Possibly the overexertion endured during hunting trips brings on heart troubles. Exposure appears at all events to render the people generally subject to lung and throat affections, which is most discernible in the spring, when the influenza rages with dreadful havoc at times. At that season the heavier outer fur garments are too quickly laid aside, while the boots do not keep out the water and slush effectually, and sickness results. During sickness, as long as strength lasts, the sufferer refuses, as a rule, to remain in the warm part of his house, and so hastens his death by exposure. Scrofula and, to a

slight degree, venereal disorders are among the native complaints. Hemorrhages from the lungs and nose are frequent. Boils and "old sores" and varicose veins give many of the people trouble. Their eyes suffer greatly from the cold wind and glare. Frequently they experience toothache and neuralgia. Indigestion and constipation are the most common ailments.

When the sufferer realizes that death impends or that much further agony is in store for him, from primarily a superstitious motive, and secondarily a desire for relief, he asks and secures the aid of his relatives and friends in ridding him of his life.

PSYCHOLOGICAL DATA.

A thick skin, if not less delicate "end organs" of sense and "pain nerves" than those of the Caucasian, renders the Eskimo on St. Lawrence Island more indifferent to cold and exposure generally than is the case with the average white man. They endure the extraction of a tooth remarkably well, in spite of the fact that their teeth are large and doubtless strongly locked in their jaws, as they frequently serve the purpose of a vise. A highly developed nervous system is probably balanced by an abundance of animal vitality. Nervous prostration could hardly occur among these people, while neuralgia of the face and head is not infrequent, due no doubt principally to decayed teeth. The bodily vigor usually is so great that mental activity does not impair it.

The development of the upper sinew of the forehead indicates the keen perceptive penetration of these natives. Usually the eyesight is very powerful, distinguishing small objects at long range. Exposure to fierce cold blasts of wind does, of course, impair the eyesight gradually, in connection with exposure to the glare of the sunlight on the snow. The old men thus frequently become blind, while the old women lose their sight or impair it greatly by sewing with only a dim light from a native seal-oil lamp to aid them. It is abuse, however, that injures their sight. If cared for, the eyes would continue to give the mind accurate details of the objects perceived.

The purely mental action in perception also appears to be correspondingly well developed. Likewise the powers of representation and conception appear to be highly organized. The imaginative function is witnessed by the ability of these natives to adapt themselves to changing conditions quickly and to invent devices in emergencies of sudden crises. They are alert, observant, ready, but not slavish in imitation, and are possessed of considerable ingenuity. To judge from a slight acquaintance with their language, they are rather given to analysis than synthesis, and hence I do not find a tendency to group many objects possessing one attribute in common, of diverse forms,

under one category. The substantives, at all events, appear to be denotive rather than connotive, but my hasty observations may be incorrect. I do not mean, however, to infer from this seeming averseness to synthesis that in their process of ideation there is a lack of full development, exactly; this is, to a certain extent, true. It is probably the result of a very limited horizon. Synthetic functions are doubtless latent, but not apparent in their mental action generally. This leads me to say that I imagine that judgments are generally fairly well grounded. I do not regard them as a people who carefully reach their conclusions by painstaking, syllogistic methods, but as relying upon their intuitions considerably, and not a little upon their feelings.

The apperceptive or relational function of the mind may be less delicately organized than in the case of the Caucasian, that is to say, in its higher reaches of reflection and judgment. In its lower reaches, of course, it is present in sense perception, association and conception. I should not expect to find these people accordingly given to introspection, philosophic speculation, or constructive science, but occupied with the struggle to live in an environment which promises in due time to annihilate them. They are children of nature in every sense of the term. Far from being discouraged in the contest, they are cheerful, fond of practical jokes, witty, and frolicsome. Their creed is evidently, "So let the wide world wag as it will, I will be gay and happy still." This temperament, in spite of very discouraging surroundings, which they refuse to recognize as hopeless, however, is a proof of the fine mettle of their minds. A degenerate race would yield to despair and give over the struggle. These people are superior to their circumstances. I am prone to believe that were they like the Caucasian, the "heirs of the ages," stimulated by suggestions from the past and present, in an abode where the mental life could take precedence of the physical and admit of all its latent functions being called forth into symmetrical activity, they would compare very favorably with the best types of civilized races to-day. In judging their mental traits, one must bear in mind that scarcely two decades have intervened, in all probability, between the present status of these peoples and the "stone age." To be sure, they not only used stone for weapons and utensils, but employed ivory, wood, and more recently iron, yet they have emerged completely from primitive conditions scarcely more than twenty-five years, if I apprehend their statements correctly. It is hardly more than one decade since whalers began their annual summer visits to this village, and these visits have been of brief duration, as the ship would leave after a day of trading, as a rule. Three whaling captains spent a winter here six years ago, not having their officers and crews with them, and the following year my predecessor, Mr. Vene C. Gambell, and his wife began their residence here as missionaries, remaining three years. I have, with a Norwegian, spent the

last year here. So really the people have not had long contact with civilized people yet. They show improvement.

With reference to the school children, those who attended with even approximate regularity displayed great capability. They are observant and imitative and possessed of excellent memories. In general, the children are self-reliant, tractable, playful, affectionate, and desirous to please. They are sure-footed, climbing over blocks of ice and stones on the mountain side, strong and steady in climbing up over the sides of a ship, some of the older ones essaying to climb the rigging.

In general, the natives are self-confident; in some instances conceited, I fancy. This leads them to readily lay aside old ways for new. What changes they do make, they doubtless choose without any outside promptings. They are exceedingly sensitive to ridicule or disparagement, and bitterly resent such an offense to their pride. They are quick tempered, but do not "nurse a grudge" after the fashion of an Indian. Their wrath can be appeased. They are courageous in hunting and brave in facing certain death. I believe that they are a very well developed people, both in mind and body, and capable, under other conditions, of the best things. Possessed of large hearts, as well as sound minds and vigorous bodies, they are capable of being christianized and civilized in the not distant future.

MORALS.

As to traits of character, there are among them, as elsewhere, the good, the bad, and the indifferent, but the types are more strongly observable here than among more enlightened peoples. On the average, self-interest is the dominating principle in the community. Disinterested philanthropy would not be easily apprehended by them. Covetousness is a marked trait, but is explainable and pardonable in view of the greed exercised by former traders and whalers among them. In self-defense, they seek and demand as much as possible in bartering and are not easily satisfied. Many are guilty of kleptomania. The disgrace of stealing here is not so great as among the Eskimos on the mainland of Alaska, who, I understand, sometimes put a thief to death. A liar and purloiner of his neighbor's goods suffers loss of respect from the other more reputable members of the community. Quite a large number are not above misrepresenting the quality of goods in barter. The family life is certainly, as referred to already, a very beautiful one, and if altruism is not very apparent in any very marked "tribal self," one would feel inclined to condone all the faults in the relations with the community in general, in view of the fine character displayed in the home. Possibly some are not far even now from the "Kingdom," as evidenced by domestic affection and love.

It would be interesting to investigate to what extent their superstitious customs incline them to morality. As far as I have been able to observe, the religion of nature has a slight influence in making the people altruistic, at all events as witnessed by the custom of distributing the whalebone and meat among one's neighbors, a custom which has a religious basis, as will appear in a later reference to traditions. The evangelization which was begun by my predecessor and continued by myself may have, as I trust it does, a wholesome influence in summoning the people to live a more virtuous and righteous life. In conclusion, I would testify that I wonder, in view of their upbringing in heathen superstition, that they are not far worse than they are.

RELIGION.

The religion of the Massinga men is in a state of transition. Stones, large and small, have a sacred value, but as "luck stones," not as idols. Large rib bones of whales are placed in an upright position in the ground, often four or more pieces planted at the corners of a square or oblong. They serve as memorial posts at times; the pallbearers, after a funeral service, embrace these posts seemingly in some purification ceremony, and then fasten to them small pieces of a seal rope which has been used to bind deerskins around the corpse. I am convinced that they are not idols. The reluctance of the people to explain their purpose is not necessarily suspicious.

A large stone, which formerly received much veneration from the natives, who used to put viands near it when some member of their household was sick, and also when the sufferer recovered, was removed, against the strenuous protests of the people, by my predecessor, in order to give place for a necessary building. They warned him that he would die in consequence of this sacrilege, and they told Abrahamsen that Mr. Gambell's death by drowning a year ago was the direct result of this presumption. One of the natives, in answer to my inquiries, confirmed this view of the matter, and said further that there was a similar stone which his father owned, and which was situated near one of the numerous paths leading from the lake to the village. He would not describe its location in detail, becoming very reticent as I asked for its exact location. This stone is an object of reverence, whether on the part of one household or of all I can not say, but I am inclined to think that at least several families resort to it at times. The other stone has been placed of late in an upright position in the yard by some of the natives, but I have not observed anyone go to it. However, dogs might devour any viands placed there during the night. *Prima facie*, this reverencing of stones indicates fetichism. I am inclined to think that it is a survival from remote ages, when the people were steeped in very gross superstition. At the present time the people have generally advanced beyond fetichism.

There is a small structure back of the mission house, consisting of three or more pieces of wood placed in upright position, in the midst of which there are some teeth of a human being, evidently very old. Abrahamsen was in the habit of throwing ashes and snow in that place, and one day was warned by a native not to do so in the future, stating that the sacrilege would be punished by a violent wind or, I think, by personal injury to Abrahamsen.

The Eskimos have apparently progressed as far as henotheism, and this is a long advance from fetichism.

I have been told by one man that they worship only one God, the same as that acknowledged by white men. But I doubt whether the people as a whole are monotheists. The doctrine of Persian religion in Ormuzd and Ahriman—the good and bad principles, or personifications or deifications—finds its analogy here. The devil receives a great deal of attention. It is as important to purchase his good will, and thus prevent his machinations, as it is to secure the favor of the Good Spirit. Yet dualism does not exhaust the deities. There is the Moon God, at all events, who is important. Sacrifices are made to him as to the Good Spirit and the devil, especially in order to bring about favorable weather during the hunting season. It has been denied by some natives that the moon is a deity. The devil has numerous assistants, who are hardly deities, but rather imps by nature and reputation. One native claimed that the soul of every person who dies becomes an imp or “devil” of this sort. He may not have spoken advisedly, however, as another one denied it. It is exceedingly difficult to penetrate the reticence of the people as to their religious belief, and one can not accurately distinguish between the belief as it was held previous to the advent of a Christian missionary here five years ago and the present modified belief. I should be inclined to deny fetichism and even gross polytheism, which might be too hastily imputed to them by a casual observer of their customs.

There is an evident belief in the soul as distinct from the body, and of its survival after death in either God’s house or the devil’s house. As to the chances of a person going to the former, they appear to be quite assured of them; but I am not certain how far their notions of morality enter their estimate of the assurance of a blissful future life. I am certain, however, that all sick persons are regarded as possessed of the devil; and if death ensues in consequence, the person is believed to go to the devil’s house in spite of a moral life hitherto, and there endures an unending torment. If the native “doctor” is unsuccessful in driving out the devil after repeated efforts, efforts for which he receives in advance a large fee, the sufferer seeks death voluntarily by securing some one to shoot or hang him, or the person may take his own life. He is believed, under these circumstances, to escape the devil and go to the happy abode

CLOTHING.

The cold climate demands suitable warm clothing for the body. The hair seal furnishes waterproof trousers, boots, and mittens, while the "big" seal supplies soles for the boots. These boots are of light weight and strongly soled, and are very serviceable in a region where the soil is rocky or pebbly, while I must confess from my own experience with them that they serve very well in the snow but are not thoroughly impervious to slush or water. Urine is very inadequate for tanning seal skin; some better method of tanning should be introduced. In Greenland the natives, under the tutelage of the Danes, no doubt, have learned to make an absolutely waterproof boot. Such a boot is rare among other Eskimos, I am told.

Deerskins are secured in trade from Siberia during the annual visit of the Indian Point natives to this place. The reindeer furs make the warmest possible clothing. Trousers and undershirts and blouses with hoods attached are made from this material. It supplies the people also with mittens and socks. Deer leg skins are made into water boots.

Feather blouses are made from three varieties of ducks, and are very warm. Rain coats with hoods attached are made from the intestines of the walrus. Grass is placed inside the fur sock and the boot (over the sole) for warmth and to absorb the perspiration. In winter two pairs of trousers are worn, the fur pair inside, with the fur next to the skin, while the sealskin pair keeps out water and wind. A fur or feather undershirt, with the fur or feathers next to the skin, is "topped" by a heavy fur or feather coat reaching to the knees, with the fur or feathers turned outside. The hood is worn only in cold weather. In the spring, summer, and early fall one suit only is worn, the hair being turned next to the skin. Mittens are always worn in paddling or rowing and during cold weather. Except in the early spring, an ankle boot rather than a knee boot is worn. Small children wear in very cold weather a large hood, which is separate and ties under the chin and protects the neck and shoulders as well as the head.

The costume of the women is patterned very nearly after that of the men. Their fur "bloomers" are made very "full," and their boots are wider at the top to accommodate this fullness; the upper band of the boot is slightly wider than that on the boots worn by men. The women do not belt in their fur frock as the men do, but wear it loosely. The babies have a single garment made of fur, or in cold weather two, I think, which covers the entire body, having no outlets for hands or feet. Sometimes they wear a separate cap or hood. A calico or "drill" blouse is worn by all over their fur clothing, save possibly the babies. This protects the fur garments. The boys and girls

dress like men and women, respectively, from the time they can walk about. Babies are carried sitting on the shoulders of the parent with their legs hanging over the breast of the carrier.

ORNAMENTS.

Strings of colored beads are worn suspended from the ears by both sexes, old and young. The women also have many necklaces, which extend to the abdomen, and in indoor dances they display six or seven of these on their persons, nearly naked at the time. A few rings are to be found among the people. A knife in its sheath is usually suspended from belts of men and boys. Amulets are worn on the wrists and ankles by females, and a necklace, made of seal rope; a similar piece of skin is tied about the waist of males, in order to guard against sickness. They are hardly ornamental. No labrets or nose rings are worn by these natives at present, but the former were worn in the lower lip some years ago.

Trimmings, like tassels of fur, are to be found on children's shoulders and on dance garments, which are slightly more ornamental than those in daily use. Some of the natives have special dance clothes. Some dance boots have three stripes of white seal skin over the dark surface of the remainder of the boot. Tassels of fur are suspended over the breast and from the shoulders of the dance garment. The decorated rain coats are worn generally in dances. Chaplets of deer fur or polar-bear tufts are worn on the head in dances by the important functionaries.

In the living room of their houses no garments whatever are worn, save such as within the narrowest possible limits preserve decency, if not modesty. Small children go wholly nude in the house, yet one must not too readily impute vulgarity to these natives. It is a necessity for them to have their living apartments very warm, and they can not endure fur clothing in a warm temperature, and hence remove their garments. It would be difficult to state that this custom has for these children of nature any special perils.

IMPORTED CLOTHING.

One welcomes the introduction among them of flannel and woolen and linen stuffs for undergarments and house suits. The importation has scarcely as yet begun, I am sorry to say. I have urged the wearing of at least a calico blouse or frock indoors, both on moral and hygienic grounds. The sick especially ought to be clothed somewhat indoors. A few cloth coats and pairs of trousers and hats are to be found here.

WALKING STICKS.

During the winter a staff about 4 feet in length, made of wood, with a loop at the upper end into which the hand and wrist are inserted is carried by men to steady their footsteps over the snow. At the bottom

there is a circular frame of wood about 3 inches in diameter fastened to the point of the stick, having sinew thread or cord laced crosswise within the frame, which prevents the stick from sinking into the snow. The point of the stick protrudes about 1 inch below this frame so as to make the purchase secure.

DWELLINGS.

At present the house, which is occupied by the family during nine months of the year, is quite a substantial dwelling above ground—in contrast with the underground abode of former days. There is a base extending upright from the ground about 6 feet, made of driftwood or wreckage, firmly nailed, and decagonal in shape. Poles and strips of wood are fastened to the upper end of this base leading up to a ridge-pole which secures them above. Seal rope is used to hold these poles in place, and they are braced by strips of wood at intervals, which in turn are supported by strong poles reclining on the ground. Walrus skins are firmly tied over this upper framework, and the whole is rendered secure against the wind by weighting it with heavy pieces of iron, large blocks of wood, and big stones.

One house, occupied by a native named Oozuk, measured in perimeter 156 feet. From the door to the back the measurement was 48 feet, while the width was 42 feet, and the height at the ridgepole 18 feet. In the interior, in the back part, a place measuring with the width of the house about 34 feet and with the length about 14 feet is partitioned off from the other and larger portion by a frame over which deerskins are hung and also mats of dried grass. This is the living room. It is lighted only by dim seal-oil native lamps. Ventilation is secured by means of holes about 6 inches in diameter in the curtains, generally two or three sufficing, and having skin covers to them which can be removed at the convenience of the people. The hot air passes through these ventilators, while to admit the cold air the curtains are raised and moved or supported by a stick for a few moments. The doorway is in the front, a square hole in the wooden base about $2\frac{1}{2}$ feet in height and with its lower edge about the same height from the ground. A door covers this entrance and is fastened by pieces of skin or by hinges. There is a latchstring on the outside to open the door when it has been made fast. There is no smoke hole in the roof. A portion of one side of the interior is partitioned with boards and serves as a larder. If necessary the living room is enlarged by adding some space on one of the sides. There are hanging shelves in the living room, also native stoves made of wood. Seal oil is burned. These also serve as lamps. Kettles are suspended over the lamps, but the cooking is not carried very far; perhaps a "parboil" is the limit. Walrus skins cover the ground in the living room. Deerskins are used as coverlets or blankets when sleeping. Large wooden trays and smaller plates of the same

material, with cups, also wood, contain the food at the meals. There are a number of tin and agate and china articles, such as pans, mugs, and spoons, with some iron teakettles, to be observed among them. The summer lodge consists of walrus skins supported by poles

FOOD.

Meat obtained from seals, walruses, and whales, together with the blubber, with ducks and codfish, serve as the staple food. Some salmon are secured in the rivers during summer and some cod in the sea. Kelp is cooked and relished. The salmon and marsh berries are eagerly eaten. A small plant furnishes an edible root, which is allowed to sour before it is eaten.

IMPORTED FOOD.

Flour, tea and coffee, pilot bread, evaporated fruits, canned preserves, candies, sugar, molasses, vinegar, prunes, and raisins are greatly sought after by these natives. In the future reindeer meat may serve as a staple food, along with imported food.

In the larger room of the house one observes "water butts" which serve as lockers. Whalebone, ivory, seal and walrus skins, and rope, together with various tools, are seen lying about.

TOOLS.

The people use a hand adz of native construction, axes, hammers, augers, bits, saws, files, nails, locks, pegs, knives, and other devices of the Caucasian.

WEAPONS.

Rifles of modern manufacture, shotguns, pistols, and darting guns are used. Harpoons are still used, made of wood with ivory heads. The harpoon is a retriever. Pokes made of blown-up seal skins are fastened to ropes to which the dart is attached. These locate the presence of a whale after he has been struck and partly keep him from a deep plunge. One poke is used for a large walrus and three for a whale.

Traps and snares secure foxes. A circular net attached to a long pole is used in catching ducks. Fish lines, imported and of native construction, made of three strips or threads from whalebone, are used in catching fish. The native hooks are not very effective, except for a very unsophisticated fish. They are not baited save with bits of red calico or flannel. Generally, imported hooks, baited with meat, are used. Ducks are snared in the water frequently. When a duck is shot and falls in the water and the person is on the shore, the duck is secured by throwing a seal hook and drawing in to shore. The seal

hook is made of a small piece of wood shaped like a "potato masher," having sharpened nails on its sides. A rope is attached to it. This is used especially to secure seals after they have been shot from the shore. In removing the bone from the jaws of a whale and in cutting up the blubber a knife shaped like a chisel, but very much larger, attached to a long pole, is employed.

OTHER HUNTING NECESSITIES.

Whaleboats, having a mast and carrying a jib and main sail, are used in the spring and whenever the sea is rough. At other times canoes made of wooden frames and covered with walrus skins are used. They have to be beached, I think, after being in the water ten or twelve hours, as when thoroughly saturated with water the skin covering would be of little use. The wooden frame is bound together firmly by whalebone thread. These canoes hold a dozen persons at the same time. They are usually paddled, although occasionally rowed. The larger size is possibly 20 feet in length with $3\frac{1}{2}$ feet beam. Smaller ones are used for ducking in very calm water. Sometimes dogs are attached by long ropes to these canoes, and pull them, some one on shore driving the dogs, and another person in the canoe guiding the latter.

Kayaks are used in the summer and early fall by a few natives on lagoons. One can shoot ducks and spotted seals in the proper seasons, but great care has to be exercised in shooting from a kayak. Frequently a four-pronged dart is used in securing seals.

Dog sleds are made of wood, having ivory on the bottom of the runners. There is no support for the back of the person who sits on the sled. Generally five or six dogs are harnessed abreast to one of these sleds, and will pull one person during twelve hours at the rate of 5 or 6 miles per hour on the average, if the snow is hard.

HUNTING.

The hunting of seals in the early winter is carried on east and south of the promontory of Chibukuk along the shore of the large bay. A hunter goes on a sled usually, having a team of five or six dogs and dragging a "trailer" behind on which to bring back his game. The dogs generally lie down quietly, tied to the sled, and the hunter goes 200 feet or more to the shore, where he hides behind a "blind" constructed of large pieces of ribs of whales or walruses, logs, and stones. From this hiding place he watches the water in front of him for many hours. He takes a lunch with him and some food also for his dogs. This shore is distant from Gambell about $3\frac{1}{2}$ miles by the path or "turnit" followed by the teams. When there is shore ice, the hunter goes to the edge of the ice with his team, and there takes his

position behind a block of ice or other obstruction. Occasionally a hunter goes 2 or 3 miles out on the ice, and runs great risks thereby, as the shifts of wind and changing currents often separate ice floats and leave gaps between them. A hunter has to observe these conditions very carefully. During December, January, February, and March the hunting is carried on in the vicinity of the northern terminus of Cape Chibukuk. Hair seals are secured during the winter season, also walruses.

WHALING.

In April there are open stretches of water near the shore sometimes extending several miles, and whales are observed occasionally and pursued in whaleboats. A dart carrying a rope either of hemp or made from walrus skin, to which three pokes are attached, is shot into the body of a whale at close range. The whale is tormented at every appearance above the water. If it dies it is cut up and the bone removed from the mouth and the meat and blubber secured, and the carcass then is left to sink to the bottom of the sea. The "bowhead" or "commercial" whale is the species generally met with here, but "right" whales are also to be found.

BIG SEALS.

The "mukluk" or big seal is secured during May and the first week in June. They are not numerous. This species provides a thick skin for the soles of water boots, as well as supplies blubber for oil and food and also much meat. The liver of seals and walruses is, after being boiled for three hours, very palatable, I find, tasting very much like beef's liver. The fur seal is not found here.

Ducks.—Ducks are shot or caught in nets, as described previously, or caught by throwing over them pieces of ivory or bone about 1 inch long, fastened by sinew, so as to fold about the creature and impede the motion of its wings.

Eggs and crabs.—In the late spring a few duck and gulls' eggs are found on the rocks of the promontory. A few crabs are picked up on the shore.

Driftwood.—Driftwood is found on the shore of the bay east and south of the promontory, but not in any large quantity. On the south shore of the island it is abundant.

Summer excursions.—During the summer a number of the people leave Gambell and go in skin canoes to distant places along the shore to spend three months fishing for salmon in the inland rivers, ducking, hunting "spotted" seals on the southeast shore, and to secure driftwood. The canoes are drawn by dogs overland in places and also in the water along the shore. Temporary lodges are constructed for summer use.

A few persons cross over to Indian Point for trade, going in whaleboats on some very calm day.

RELICS OF THE PAST.

Underground house.—There are a large number of holes in the ground on the outskirts of Gambell, circular in shape, measuring 20 feet in diameter, generally, and with a passage of 10 feet in length and $2\frac{1}{2}$ in width and height, covered over on top, leading to them. The sides of the hole are lined with stones and walrus bones, as is also the passage, the latter supported by walrus ribs usually, and covered with earth. The main hole formerly was also covered over with earth, save a small hole to emit the smoke from within, and to admit light from without. This was the style of house (ningloes) which the natives on this island formerly occupied.

One of the "ningloes," situated about 10 miles from Gambell, is occupied during the late fall and early winter, and an examination of this dwelling gave me a fair impression, no doubt, of the type of underground dwelling. One enters by climbing over a barrier of wood, square shaped, about $2\frac{1}{2}$ feet high. Descending 5 feet, one has to stoop so as to walk nearly "on all fours," and follows a slightly curved passageway underground, which leads to the main room. The space below the entrance is a sort of storeroom, I think. The sides are lined with driftwood and wreckage. There are two raised platforms about 2 feet high on two sides of the room, to serve as seats or couches. There are closets in the sides of the walls in which utensils and garments are kept. There is a skin cover and a wood cover also, I believe, to the smoke hole in the roof, regulated by ropes from within. The outside appearance of the house resembles a snail and its shell somewhat, as there are slabs of bone protruding from the top of the entrance which look like the snail's "feelers," and the high mound, 8 feet possibly above the level over the living room, resembles the snail's shell.

Weapons of former days.—Bows, made of strong wood, protected and rendered lithe by sinew tightly bound about them, and arrows with ivory heads, or later iron heads, were used in war and in hunting. A four-pronged dart or arrow was used in ducking, having one point in front and then others a few inches back. The string of the bow was of stout sinew. One small feather usually sufficed to steady the arrow. Guns have, of course, entirely supplanted these weapons.

An iron-tipped spear was used in war.

Armor.—To guard one's body against a spear thrust or the ingress of an arrow, armor was worn. It was made of pieces of wood covered by thick seal skin tied together so as to "give play" to the body and legs. It extended from the chest to the knees, and was supported by shoulder straps. It looks like wide hoops tied closely together. The head and arms were protected by a helmet shield, which also was constructed of wood and covered by seal skin. This was fastened to the armor coat and extended 4 or 5 inches above the head; it had folding parts in front, with loops into which the arms and wrists were

inserted. In shooting with the bow this folding shield could be opened sufficiently for the purpose and quickly closed again. After shooting, the person quickly crouched so as to make as small a target for the enemy as possible, and also to protect his legs better. The latter were in many instances protected by boots lined with wood. A small ivory or other bone protector was worn on the wrist of the hand holding the bow, to protect it against the rebound of the string. Gloves were worn on the hands usually, not mittens. The quiver containing the arrows was hung on the back inside the helmet shield. Dodging was resorted to whenever possible, as the sharp-pointed arrows sent from a strong bow were not to be lightly regarded even by an armored man.

Fox hunting.—In former times "circle" hunting was the chief method in securing foxes. A large number of men "rounded up" or inclosed foxes in a net, to which the entrance was sufficiently wide to attract them, and then the foxes were killed.

Walruses.—These were taken by harpoon having a loose head which remained in the body with a seal rope attached to it, while the shaft was drawn back by the hunter by a line.

Seals.—These were only rarely secured before the introduction of guns. They were always wild, and it was exceedingly difficult to secure them. The natives regard it as a great boon to be able to get a large number of them in these days for food and oil. In the old-fashioned house, the people had to depend largely on the light admitted from without, having only a scant supply of seal oil. It would be impossible for the people to live in the inner room of their present houses without using lamps all of the time.

RECEPTION CEREMONIES.

Whenever the villagers from Southwest Cape visit "en masse" the people of Gambell, usually for the purpose of barter—as the former natives rarely have an opportunity to trade with whaling captains and never with the Siberians directly, and hence depend absolutely upon the Seevookup people for trade—they are met on the outskirts of the village and escorted to a place where reception ceremonies impress them with their welcome. A representative of the Gambell people and one of the guests—always males—dressed in rain coats which are decorated with fur tassels, engage in a sham fight with long iron-tipped spears, keeping them crossed and bounding forward and backward, the one driving the other about 150 feet and then retreating before the attack of the other. A piece of seal skin is placed on the ground midway in the stretch occupied by the combatants, and they go back and forth over this. Sometimes there may be three representatives on a side, two pairs consisting of men and one pair of half-grown boys. A chaplet is worn on the head by these persons, made of strands of polar-bear fur. The guests are then assisted to unharness their

dog teams, and the dogs are fed. The visitors are cared for by individual hosts according to a preconcerted understanding. In the dance that follows the refreshments the young women and even old women of the visiting party are most prominent. Generally the orchestra is made up of the guests. One of the latter, a man, dances with the women until they are allowed to retire from the performance as participants and to watch the movements of a number of volunteers among the women of the reception party. Little children have their opportunity, and are loudly applauded by their parents and patrons, whose encouragement is vocal, not given by clapping. After trading has begun one of the guests will place some dried salmon or other article of trade on the walrus skin, and he and the wife of the man who desires to enter into the trade will dance together, the latter taking the article to her husband. Later he will, in turn, place the article which he wants to give in exchange—as some flour, for instance—on the skin, and dance with the wife of the other man, who will take off the article to her husband. In all trading, I understand that the dancing is as described above. The entertainment lasts many hours generally, most of it taking place at night. These dances occur in the house, never out of doors, I think. If the large, cool part of the house is used, the people are dressed in their furs. The women, in dancing, expose the right arm and shoulder. If the living apartment is used, the women dance almost nude. Strings of beads are worn about the neck, hanging far down over the abdomen. In case of a female the feet are not moved at all, but the movements are made by the arms and hands and by bending the head and the body. All the movements are “jerky.” The men lift now one foot and then the other, and stamp vigorously, in addition to making the other movements of arms, hands, and body. Generally the man beats time and also makes a little music with a drum to accompany his partner and himself, and shouts in chorus with the orchestra, who chant and beat drums loudly.

Kazzeera Ghülekyyjuka (dance), given by the Chief Assoone.—Assoone, his wife, two daughters, his brother, and brother's wife stood upon the roof of his house, while a choir of women stood on the ground below near the door. The roof was too slippery to admit of more persons upon it. Formerly a large number of people would stand, in observing this dance, upon the roof of the underground house. Assoone related in his chant the narrative of the destruction of his house by fire a year ago during the winter, when he was absent at Southwest Cape and his family and other members of his household were attending a dance at a neighbor's house. Some blubber which was cooking over a seal-oil lamp accidentally caught fire and caused the destruction of the property. The people were greatly alarmed when some powder and cartridges exploded, and ran for their lives. The

programme was as follows: First day, singing by the party on the roof of the house and by a choir of women near the door; wrestling occurred later, the young men being stripped to the waist; second day, dancing on the part of the men in the house; third day, couples walking around a pole in the house in single file, the women being clasped in the arms of their partners; trading concluded the dance.

The interior of the house was suitably decorated with paraphernalia appertaining to the dance. A wooden effigy about 3 inches long was fastened to the center pole, representing Assoone, I understand. Below this figure, at either end of a stick tied horizontally, was a wooden effigy of a duck painted fairly well, and with a movable head, which was turned from side to side at times by means of whalebone thread. Above, about 8 feet from the ground, there was a framework consisting of paddles arranged in crisscross fashion, between which ran several seal ropes, to which were suspended small wooden rings 4 inches in diameter for the larger ones, and 2 inches for the smaller ones, with a piece of wood hanging through the latter, which represented the "houses of seals" in the sea. There were pendent also from this framework a number of wooden figures with gull feathers for wings, and gull heads. Immediately above the framework there was a long steering oar, and adjacent to it harpoons, lances, seal-skin "pokes," and paddles painted with a black stripe on the blade to indicate that they had been used by the helmsman of a successful whaling party. At the base of the central pole was a rain coat rolled up containing something whose character I was unable to divine. The wooden ducks appeared to be very important functionaries at the festival. Assoone and some of his relatives represented now and again one or the other of the ducks, making requests in their behalf for various articles, for which payment would be made later. For instance, Assoone's nephew said that one of the ducks desired me to give to one of Assoone's daughters a quantity of raisins, for which a pair of boots would be given to me in due time. He was very anxious that I should comply with the request, inasmuch as if I refused the duck would die from a sense of mortification, and this would furthermore "kill" the dance. It is needless to add that this calamity was not risked.

Assoone, his family, and a few other relatives wore a costume appropriate to the festival. Rain coats were worn with the hood over the head, in some instances decorated on the shoulders with tassels made from "down" of the "shag," and with gull wings. The mittens were of seal skin from which the hair had been removed; there were two parallel white strips of skin sewed on them. Assoone's wife, her daughters, and the other females that constituted the choir wore white seal-skin boots. The boots worn by Assoone and some of the men and boys were unbleached seal skin with white strips of skin sewed on the sides in parallel bands.

This kind of dance is held only at intervals, being observed after one of the "doctors" has learned the pleasure of God with respect to it. After it has been held annually for five times, it is discontinued for at least five years.

A new dance (given by Imurrugun).—A dance which appears to have been a new one and to which no name was given was held during four days by one of the more progressive natives. In front of the house two spears were tied to an upright planted in the snow, and one spear to a second upright, while two walking sticks were also placed vertically in the snow opposite the door. The outside posts were four in number, between the tops of which walrus ropes were stretched. Inside of the house a number of rain coats were hung on seal ropes and fish lines. There were also inflated seal skin "pokes." Around a seal-oil lamp, near the center pole, were placed five benches with high, thin legs, upon which Imurrugun, his family, and some intimate friends sat and beat drums and chanted. On a high but very narrow bench were placed small wooden effigies of Imurrugun and his wife, while two other similar benches supported effigies of his relatives and friends. There was a miniature wooden house, which possibly represented the old-style dwelling. I could not definitely learn its significance. On the first day Imurrugun, together with his male relatives and friends, having on rain coats and water boots, went to the shore, where they remained a short time. On the second day the men participated in a dance which somewhat resembled jumping. Trading followed. The third day was given over wholly to trading. On the fourth and last day the men indulged in a 3-mile run, after which they were treated to a feast by the women of Imurrugun's household.

"Autugluk"—*Worship of the Moon God.*—Early in the morning one day in spring, when the hunting season was drawing near, Akulky, together with the male members of his household and a few other male relatives and friends, placed his canoe on the shore ice, with the bow protruding over the water. They entered the canoe, Akulky occupying the seat in the stern, while his son sat in the bow. Taking their paddles, they fanned the air with them in a mimic ceremony representing a hunt. A darting gun was held partly in the water. When the sun appeared above the mountain all left the canoe and Akulky made a sacrifice to the "Moon God," in the hope that favorable weather would be granted during the coming hunting season. I am at a loss to understand the connection between the appearance of the sun and this sacrifice to the "Moon God." The sacrifice consisted of small pieces of tobacco secured in trade the previous year from the first trader that season, and also of some pieces of baby walrus caught during the previous year and dried and reserved especially for this sacrifice. Akulky threw the tobacco and the walrus meat into the air and also into the water. Then followed a feast of dried salmon, walrus

and seal meat, and pickled red berries, which were served in two very large oblong wooden plates; the black skin of a whale, but no other kind of whale meat could have been eaten at this time. No white man's food would have been deemed proper at this ceremonious repast. This sacrifice to the "Moon God" was made during February by the heads of four different households, and by Assoone, the chief, during March, and six times during April by as many heads of families.

Mähatak, or Ola Hola (held by *Timkaroo, Shoolook, Oozuk, and others*).—This dance lasts during only one day. A walrus skin was placed on the ground near the house between two spears which stood erect, and upon this skin several wooden plates were set containing food. Near one of the spears were several wooden effigies, exceedingly small, which I rashly picked up and examined, thereby committing sacrilege, and was requested to restore them to their former positions straightway. After the guests had feasted, a repast of which Abrahamsen and I were invited to partake, the walrus skin was ceremoniously removed and the men and boys took hold of its sides and at a given signal tossed Timkaroo, the chief functionary of the dance, high into the air. The person who is to be tossed stands upright in the center of the walrus skin and is thrown 10 or 12 feet upward, and, if the toss has not been foul, will come down safely on the feet on the walrus skin. This exercise is called "Ovuktuk." After one or two men have been tossed it is the turn of the women and children, the latter being sometimes compelled to go through the ordeal against their will. It is a very dangerous ceremony, I believe. On one occasion I saw a young woman thrown foul by accident and fall from a height of 10 or 12 feet to the hard ground. She was rendered unconscious for a time. Her left clavicle was broken, but otherwise, beyond a bad shaking up, she was not seriously injured. Trading follows the "Ovuktuk," being conducted within the house, accompanied by singing and dancing. I think that every householder celebrates the "Mähatak" or Ola Hola annually.

"*The Kazzeeva*."—During a four days' dance given by Assoone, the chief, not the dance called Kazzeeva Ghulekkyuke, the noteworthy feature was recitations on the part of the women and girls, after dancing with a male partner. These recitations related feats of some one of their ancestors or present relatives, such as crossing to Indian Point in rough weather or running from a polar bear. I observed that in this dance an elderly woman beat a drum and was a very important functionary. If my memory serves me correctly, Assoone, his two sons, and his brother ran round the center pole, rapidly keeping the pace for a long time in spite, doubtless, of giddiness and fatigue.

Oozuk's dance.—A few days after his return from a visit to Indian Point, Oozuk celebrated a dance in front of the mission house. The men and boys ran round with all their speed in a circle, a number of

them having with them their walking staves. It was possibly a half hour before they were exhausted in this exercise. I was told that such a circle was formed when the Indian Point and Plover Bay natives were received, and that the exercise was held on this occasion as if a reception of guests was taking place, as the people believed that no visit would be made that season by the Indian Point and Plover Bay natives. The second feature of the programme was a feast. The women of Oozuk's household brought some venison and Russian tobacco which had been recently secured in Siberia and placed them, with substantial viands of walrus and seal meat, I believe, on a walrus skin which had been laid on the ground. Then the very old men of the community were invited to the repast. Later Oozuk gave small pieces of tobacco to some men who were less aged than the others and who were less intimate with him. Tossing in the blanket concluded the ceremonies.

Marriage customs.—Boys and girls of tender age are engaged to be married, but may make different contracts later on. When a young man desires to marry, his father and one or two other male relatives voice his request to the father of the young woman who is the object of his affections. A price is agreed upon, which in due time the lover pays for his bride. During a period lasting from six months to a year, there is an engagement. The bride-elect visits the mother of her lover a few times, spending the night with her, but carefully avoiding her intended husband. I believe that the engagement begins with a dance at the young man's house, given by his father, when the young man takes the young woman as his partner in the dance. The wedding ceremony consists of a dance at the house of the girl's father, after which the bride accompanies the groom to his house as his wife. If in due time no children are born to the couple, they request a child from the family of one of their near kindred, and as a rule are gratified, retaining the child thereafter as their own. The first baby is not given in this way and the second very rarely. After one set of children has been raised the husband is apt to take a second wife, a younger woman, in the hope of enlarging his family.

AMUSEMENTS.

Wrestling.—Primarily the dances are the great functions and render most enjoyment. Wrestling is indulged in frequently, either inside of the house or out of doors. It makes no difference that there is snow on the ground or that the thermometer indicates a freezing temperature. If out of doors, the contestants are stripped to the waist, while they go almost nude indoors. The two contestants generally lock arms over each other's neck, and strive each to bear the other down, pushing and pulling each other. The hold is broken now and again when one tries to catch the leg of his opponent, or to slap him vigorously on

the body or face. A favorite "throw" is to catch one's opponent by the leg above the knee and toss him over on his back. Sometimes one will trip the other. The winner, before he has time in which to recover his wind, must meet another contestant, who, by reason of his freshness, is a likely winner. In these contests considerable muscle and endurance are in evidence.

Jumping the rope.—Two boys turn the rope from left to right rapidly three times, slapping the ground with it, and then reversing the movement for three times. The jumper has to skip this rope, making due allowance for the change in movement, and jumping from place to place to accommodate himself to the rope; after three jumps on the right and three jumps on the left he must dodge the rope, run around one of the boys turning the rope, and skip the rope at a certain time. Very considerable agility is required for this performance.

Ball playing.—A ball measuring about 9 inches in diameter, quite soft and covered with sealskin, is tossed by one boy or young man to another of his sex, while the girls and the young women endeavor to intercept the ball, and if successful pass it to one of their number, subject to interference on the part of the young men and boys. This is a very popular game.

The "kip-up."—A thick walrus rope is stretched several times about two stout uprights of whale jawbones, and upon this rope the feat known to the gymnast as the "kip-up" is performed. Strange to say, the natives do not, as a rule, strip for this exercise. Climbing with one or both hands is somewhat less popular.

Tag.—The children and occasionally the middle-aged men indulge in this game. The latter climb up upon frames which serve as store-houses, and when pursued nimbly jump off and try to escape.

Hop, skip, and jump.—All of the children are very fond of this exercise, which I presume was taught them by my predecessor, who also added to their list of games that of running around and swinging at the end of a rope attached to a May pole. The girls and young women and little boys practice the high jump, leaping over a walrus rib or other obstruction.

Hunting games.—The little boys carry a piece of seal rope which dangles from the back of their blouses. This is to be caught up by anyone who is charitably disposed, and the little fellow runs as if he were a dog driven by his master. If the little boy is fortunate enough to have two or three sleigh bells fastened to his blouse his happiness is complete. The boys have a mimic hunt after walruses and seals sometimes. They use a rope, to which a stick is attached to serve as a harpoon. Some of the boys are hunters, while others represent the walruses or seals. The hunter will run up to one of the boys acting in the latter capacity and will touch him with a stick of wood. Then the boy who has been captured grasps the stick and holds on to it

firmly, while the hunters pull him toward them. Every boy is skillful in the use of the sling. Whenever they see a bird approach they sling a stone at it, and doubtless in rare instances maim and secure it. Very small children sit on the ground and make miniature houses, using small bits of bone, pebbles, and sand or earth. Small pieces of wood are planted in the ground to represent people, while pieces of bone or small stones represent whales, walruses, and seals. The children use miniature popguns, shooting pebbles from them at the pebbles of others which have been thrown into the air. A sort of "bolos" is used infrequently in the effort to entangle and cripple a duck in its flight; it consists of three pieces of bone which are attached to the loose ends of three pieces of seal or hemp rope, which are joined at the other end. The "bolos" is used frequently in play. One of them is thrown into the air, while another is sent after it to intercept it in its downward course.

There are house games, notably cards, in the use of which the men often gamble.

Small pieces of whalebone are cut so as to represent whales, and the little children have a mimic whale hunt by means of them. I have seen many miniature whales, seals, walruses, ducks, foxes, and bears carved out of ivory, and possibly they are used in some of the children's games. There are, moreover, miniature canoes, whaleboats, and schooners, some of which are fairly complete in their equipment, including effigies of sailors.

Skating.—This is "par excellence" the popular exercise of the men and boys. They make skates for themselves, sharpening the edge of a piece of an iron barrel hoop and inserting the blunt edge into a block of wood, which has been rudely shaped to accommodate it to the boot, to which it is bound by sealskin straps. They do not pretend to be graceful skaters; they prefer to play "shinny" rather than practice tricks. All enjoy sliding on the ice and coasting on dog sleds down the slopes of the beach and occasionally the mountain.

The calendar.—The year is measured from winter to winter and is made up of lunar months, which, in turn, are subdivided according to the moon's phases. The day is not divided into a period theoretically based on light and darkness, but upon the period of sleep, which is relatively constant in duration. The period of light during the day, at least when the sun is visible, can be divided with reference to the change from time to time of the solar orb.

The daily routine.—After a sleep, presumably about eight hours in length, which has been uninterrupted in the case of the men and the boys, but occasionally interrupted in the case of the women when the seal-oil lamps require attention, the household comes forth from beneath their coverlets of deerskin and prepares for the activities of the day. Very little time is required in preparing breakfast or the

other three meals during the day, as meat is only parboiled, and perhaps more frequently is eaten raw. The food consists of the meat and blubber of whales, walruses, and seals, the flesh of ducks and fish, together with some varieties of kelp, sea urchins, and crabs. They are fond of imported articles of food and drink, such as flour, molasses, sugar, candy, canned preserves, preserved and dried fruit, rice, with tea, coffee, and condensed milk. The man of the house makes ready for the hunt, not failing to take a lunch with him. Five or six dogs are harnessed abreast to a sled, to which a "trailer" is attached to carry any game that may be secured in the hunt. With his gun slung in a case over his shoulder, he fastens his harpoon and seal hook on his sled, and when mounted cracks his whip and is borne rapidly along by his dogs over the snow and ice to his hunting place. The boys follow their father on foot, having a gun or a harpoon. The women or girls of the household busy themselves during the day in cleaning seal meat from the bones, in preparing the meals, dressing skins by aid of their strong teeth, and making from them garments, boots, and mittens. The intestines of the walrus have to be thoroughly cleansed by means of water and pebbles, and when dried are to be made into rain coats. Calico blouses, also, are to be fashioned for the protection of their fur garments. The little girls are taught to sew miniature articles of dress, and gradually prove very serviceable to their mothers in sewing and other household duties. The father returns from the hunt after an absence of possibly ten hours, and is ready for his supper. In the evening the family may receive some guests or entertain themselves in various ways, doubtless the father and boys relating the incidents of the day's hunt, while the women and girls in their turn narrate the interesting events that have transpired within the house during the day. Such, in general, is the programme during the late fall and winter. With the breaking up of the ice in the late spring, for the men there is a slight change in the daily routine, inasmuch as they then go in whaleboats in pursuit of whales, walruses, seals, and ducks, abandoning their dogs and sleds temporarily. I understand that there is a stereotyped programme for the women and girls in the matter of dressing skins and sewing them into suitable articles of clothing.

CHIEF ASSOONE'S HISTORICAL SKETCH.

The first captain who brought a ship to this place was Captain Salmon, who came about forty years ago or earlier. He traded for whalebone which he saw rotting on the ground. The people had no use for the bone except the small slabs which they used in making fishing line and thread, and they threw the big slabs away. After observing that Captain Salmon was willing to trade for this bone, the people saved it. The second captain was named Moore, and came when Assoone was

too young to notice the event. Guns have been used here about fifteen years. Strong bows and arrows were effective against enemies and their game. An arrow could be sent clear through the body of a bear if no bone was struck. Whales and walruses abounded. There were more people at this place formerly than now. Even long ago, houses were built above ground in the summer, but in winter the underground houses were used. However, Assoone's father built a very large overground house for the use of his friends and family during the entire year. This house was as large as the school building.

The famine which destroyed nearly all of the inhabitants of the island occurred about nineteen or twenty years ago. The villages have never since then been repopulated. The dead were not buried, but left to decompose where they fell, as the other people were too feeble to give them burial.

Sometimes a canoe party would be blown by a gale to Indian Point, Siberia, and be put to death.

Opium was formerly secured by the people in trade with the Indian Point natives. Assoone desired me to procure some for him next year in return for some things which he would make for me. I explained the deadly nature of this narcotic, and told him that I could not possibly place it in his hands. I was glad to hear that none of it is secured from Indian Point or from whalers at present.

SHOOLOOK'S LEGEND.

The Massinga men, according to Shoolook, have believed in one supreme god. Myerapuk, the Massinga Moses, was a very big giant who used to walk in the Bering Sea, sinking only waist deep, so tall was he. He was the friend of god and interpreter or prophet to the Massinga people. He visited all places and all peoples. The Indian Point and other Eskimos, Nakoorooks, hold the same tradition. The soil of St. Lawrence Island and elsewhere was soft, but this man with his knife cut off large blocks from the soft mountain and made them stepping stones, rendering them firm. There are many of these stones near the sea along the lower sides of the mountain. He made seats also in the side of the mountain where he could rest, making them firm. The snow now remains in them, but in summer time they can be seen. He was a friend and teacher of the "First people" and thus aided many of the Eskimos here and elsewhere. Myerapuk in the spring used to walk in the sea near the shore and catch a whale in one hand and put it in his "atkok"—his fur blouse—making it fast, as in an apron, by means of ropes. Sometimes he would catch walruses and big seals and other fish in the same way. In the fall he would eat one whale and then lie down to sleep for the whole winter and would not awake until spring. Often he caught bears (white and brown), foxes, and other animals and ate them. He was very generous to his friends, the Massinga men, and other Eskimos, and often

would throw whales, walruses, and other creatures on the shore for them to eat. He had a stentorian voice and the people would feel afraid when he talked. When he would awake from his sleep he would talk a little, and all people could hear him and know that he was awake. When Myerapuk would see a man paddling a kyak he would often give him food.

FRIENDS OF MYERAPUK.

Yupagh'aghat, who were dwarfs "half arm" high, who had also very big voices, were very strong, could lift a walrus, one little man taking the tail end and one other dwarf taking the head. They could lift a big whale like the present species between two of them; but a very small whale about 4 feet long was so very heavy that they could not lift it and had to fasten ropes about it and very slowly pull it to shore. The present Massinga men occasionally find one of these small whales (probably a porpoise) and can lift it between two of them, but can not, of course, lift a big whale.

Once when the little men were trying to lift one of the small heavy whales, god said, "Do not try to lift it; it is too heavy; fasten a rope to it and so pull it to the shore." The little men had small houses. The dwarfs lived south. They may have been Japanese, Aleuts, or Indians.

Two dwarfs from the south, not of the same village as the others, were blown by a gale to the Massinga village. The Massinga men said quietly to one another that they would kill them, thinking that it would be easy and that they were not overheard. The Massinga people crowded into the house which sheltered the dwarfs, and attacked them, but the latter were strong like gods and broke in the chest bones of their assailants and crushed their skulls. Then the dwarfs escaped, going south on pieces of ice.

FIRST PEOPLE.

The chief was bad. If he caught a whale he would allow the meat or flukes to rot in the blubber room and give rotten food to the people, keeping the good food for himself and a few friends. He helped only a few people. God did not like this.

His son tried in the winter to strike with a harpoon a big seal which was on the ice near the shore, but missed his aim. The seal would go down and reappear further off. He tried desperately to strike big seals, but always failed. Then the floe ice went off, young ice formed, and big seals disappeared. The young man got on a cake of young ice and the waves tossed him to and fro and made him very sick, so that he took out his knife and was about to kill himself when he heard a voice saying: "Where are you going?" "I am going down," he said. God bade him go to his house, saying that his place was a good place. The young man could not see any person and marveled whence

the voice proceeded. After some more tossing, he again took out his knife. God spoke to him again: "Your father, the chief, is a very bad man. I give him whales and he allows the meat to become rotten. I do not like him, but I will take you to heaven." The young man then killed himself.

By and by god put the young man in a box so small that he had to double up, and said to him: "Your father makes the food rotten that I give to him and the people suffer. I do not like this and shall make you suffer." So he gave him a small piece of food—about the size of a lump of sugar—and a little water and locked the lid of the box. He made the young man suffer hunger and thirst on account of his father's ill doing, but did not allow him to die a second death.

The father could not sleep, worrying over the disappearance of his son, when all efforts of the people and himself proved unavailing to find him. A little girl whose father, mother, and grandparents were dead was a "woman doctor." She sang to the chief that the young man had been taken by god and was now in a box. Then god allowed the chief to walk up a path (like a ladder) to heaven and told him to look at his son in the box. Then the son said: "Father, I am nearly dead from hunger." God told the chief: "I am angry with you for making the food which I give you rotten, and I shall make your son rotten." The chief asked god what he would receive from him to make good the wrong. But god said that he would not want anything that belonged to the chief, but that he would not lessen his anger, and would make his son rotten. Then the chief went down from heaven to his house. Again after a time the chief went to heaven and asked if god would accept a fine young dog. God said he would, and he let the son out of the box and washed him. Then the two went home. The chief was good after that, being warned to make food rotten no more.

Depopulation of several villages.—Formerly there were large villages at South East Cape and North East Cape, numbering together possibly 300 people, while there were smaller ones, numbering in all 150 inhabitants, at Cape Kuhuliak, Cape Sieperno, and a promontory east of this latter one. Simultaneously, or nearly so, these several villages were depopulated. From a reputable native at Gambell I learned that about the same time when these villages were depopulated the village at Gambell lost half of its numbers, while the death rate at South West Cape was yet larger and that there was great loss of life at Indian Point and generally along the Siberian coast. Starvation resulted by reason of a succession of fierce blizzards, which prevented hunting, and, furthermore, from an unusual scarcity of seals and walruses. An old woman who now resides at Gambell, having left one of those villages on the north shore during the fall preceding the fatality, or the previous one, asserts that the people of her village

flayed a walrus alive and threw the suffering creature back again into the sea, in the hope that they would secure it in due time after it had gained a new skin.

Utensils and dishes.—The seal-oil lamp serves as a stove during the winter, while in the summer a fire is kindled from small pieces of drift-wood. Over the blaze iron or tin kettles are suspended, holding meat and a little water. From the kettle the food is placed in long narrow and shallow wooden trays. There are trays of small dimensions, some of which are of greater depth, resembling wooden bowls. There are also wooden cup and saucers. Imported tin spoons are used, as well as imported teakettles, teapots, and buckets. The women of the household cut the meat off from the bone or slice large pieces of it into smaller ones, using a knife fashioned like a meat chopper—not like a butcher's cleaver. About the various trays the members of the family sit down or recline, and help themselves to the food, using their fingers. The trays are cleaned sometimes by wiping them off with grass, while at other times they may be rinsed off with water.

Dressing skins.—The men remove the skins as well as cut the meat from the bones of walruses, but the women generally look after these matters with respect to the seals. The blubber is carefully scraped from the skin, and urine is then rubbed into the skin, which is dried, stretched on a wooden frame near the lamp, the hair turned from the blaze. If water boots are to be made, the hair is removed from the skin before the latter is dried. After two or three days the hard lumps on the surface of the skin are removed by means of a knife, after the skin has been moistened with urine. Soap is used, if available, for cleaning fur, but seldom if ever for cleaning skin. If the hair is removed from seal skin, the latter is frequently bleached by the sun and the cold air. The hair is partly allowed to rot off from walrus skin, then a knife makes the surface clean, after which the skin is stretched on a large frame and separated into two thin skins and exposed to the sun for several days. It is used for the roofs of houses and for the covering of canoes. Rope is also made from it. Deer skins are received in trade from the Indian Point natives, sometimes dressed, but not always so. Deer skins, after being scraped and cured, are frequently dyed by means of reddish clay.

Tattooing.—Males are not decorated in this way. When a girl reaches her ninth year or thereabouts, she is subjected to this painful ordeal by her mother. By means of a sharpened nail and some seal oil and soot, three vertical lines are drawn on the chin and three semi-circular lines on the lower part of each cheek. These lines follow the stereotyped pattern. Later there are other lines on the sides of the face and on the nose, according to the desires of the mother or other relatives. An unusual event, such as the capture of a whale by her father, is designated on her cheek by suitable lines, which advertise her father's

prowess to the initiated. The back of the hands, the wrists, and the arms receive slight decorations.

Cleanliness.—The natives can not boast with respect to this. Semi-occasionally the face and hands and possibly the scalp are bathed with water, and, if available, soap. Urine is a substitute among these people for soap. The fur clothing, of course, can not be washed, while the calico blouse is very seldom rendered clean. Filthy garments on unclean bodies produce lice.

Counting.—There is no written language and no figures to represent numbers. Some of the people trust wholly to memory rather than to a record of their trade transactions and obligations. Others resort to a very simple method of recording small numbers. On a stick or anything else upon which an impression can be marked or cut, vertical lines are made one after another, as in a tally. The first and last ones of each series of ten are about three times higher and somewhat thicker than those representing the intermediate numbers, save the fifth line, which is slightly larger than the small ones. In bartering with others the fingers and toes are resorted to very conveniently to express numerical relations. Each hand and each foot represent, respectively, the number 5. The fingers are first counted. The fingers and toes together, amounting to 20, of course signifies the number 20, which is called "yuweena," based on the word "yuke," which designates one man. The trade transactions do not usually involve difficult numerical relations. There are words for counting numbers as high as 400, but there are probably few of the people who ever count higher than 100. The numbers from 1 to 6 bear separate names, while the names of 7, 8, and 9 indicate a relation between these former numbers, with 5 or 6 as a basis. The names for 10, 15, and 20 are not based on the names of the smaller numbers. The numbers between 10 and 20 are simply constructed by combining 10 with the lesser numbers. Thirty is 20 plus 10, while 40 equals two twenties, or "2 men."

One—Atassik.

Two—Mal(g)ho.

Three—Pingiyoot.

Four—Stammet.

Five—Tathsleemet.

Six—Achovindluk.

Seven—Maharachovindluk.

Eight—Pingiyoomungingluluk.

Nine—Stammenungingluluk.

Ten—Kohla.

Eleven—Kolam atassik seepnukloga.

Twelve—Kolam mal(g)hok seepnuklokuk.

Thirteen—Kolam pingiyoot seepnukloga.

Fourteen—Kolam stammet seepnukloga.

Fifteen—Akāmiak seepnukloga

Sixteen—Kolam achovindluk.

Seventeen—Kolam maharachovindluk seepnuklogā.

Twenty—Yuweena.

Twenty-one—Yuweenam atassik seepnukloga

Thirty—Yuweenam kolam seepnuklogā.

Forty—Yuwokomal(g)hok.

Supplication to deities.—Prayer to their deities is not made oftener by any one than once in three months. The supplicant goes off alone, arranges his mittens so that the under side is on top of his hand; the arms are used somewhat as in a dance, accompanying the prayer, I think. One must not presume to talk to God on any and all themes, unless I am mistaken. The weather is the only proper topic. God may be far distant, and may not therefore hear prayers.

Superstitions.—The skull of a seal, after the meat has been removed, is thrown by the women into the sea. It would bring bad luck if this were neglected, especially if the skull were thrown on the ground and the dogs had a chance to further clean it. As a matter of fact, I have seen dogs accompany a woman on her way to the shore and succeed in getting some bones of the skull when they were cast from the shore ice to some cakes of ice below. The woman must have been aware of the sacrilege, but doubtless took refuge in the hope that her motives, at least, were of the best. Seals are looked upon as a great boon, not only because of their meat and skins, but because their “blubber” can be “tried out” into oil, which furnishes both light and warmth. Before the natives were provided with firearms not many seals were secured, I understand, and hence the underground house was a necessity, as it was warmer than the structure built above ground. Light was admitted through a window in the roof, but the winter was naturally very gloomy under these conditions. When it became possible to secure a large number of seals, and oil was consequently abundant, the lamps could be kept burning day and night, and consequently the present style of house could be erected, no window being necessary. The people are fearful of offending the seals, and are most punctilious in throwing the skulls back into the sea, as they fear that their sacrilege would result in a great scarcity, if not the entire withdrawal of the seals. I have been told that the flippers of the seal are thrown into the sea as well as the skull.

Charms.—The first men saw some luminous objects fall from the sky to the earth, and ran after them, observing them becoming smaller and smaller, and fading from their view, save when god permitted some favored man to secure one of these coveted stones. They were never taken in the bare hand, but caught with mittens. They were handed down as precious heirlooms from father to son, and are regarded as luck stones. In all probability the luminous objects

shooting through the sky were meteorites, while the stone that was picked up at length was probably some pebble on the ground that attracted attention. The Chief Assoone has two of them. Such charms are efficacious in whaling. A small bag is made fast in the bow of the boat containing such charms, together with others, such as pieces of fin bones of whales and walruses, bristles from the face of the walrus, a part of the nose of the "big" seal after it has been dried, together with a small piece of walrus skin.

The aurora.—Probably the phenomenon is the basis of the following superstitious tradition: The devil has a big fire which would frighten any beholder nearly to death. The only protection against the devil and his fire would be to throw a knife or something else into the air, and in this way the spell is broken and no injury will result to the terrified person. A knife is effective at all times against the devil, who might otherwise cook and eat a man. The knife can be picked up after it has been thrown, and used thereafter. The appearances of the devil are supposed to occur, as a rule, at night; accordingly the natives, save when inflamed by strong drink, will not venture forth from their houses after dark, even in numbers. I think that little devils, or ghosts, are also feared at night. Spirits of the dead, which are occupants of the devil's house, a place of torment, are believed to wander forth occasionally, but can never escape to god's house. To see these ghosts would probably terrify one to death. Very rarely the sight of them may strengthen the spirit of a man, and make him eligible for the office of shaman or medicine man. In his performance, a mighty medicine man receives into his body the big devil as a special favor of god, and then is given the power to drive him out. The medicine man later has the power to drive out a devil from a "possessed" person, i. e., a sick person. The drum and dialogues with the patient are regarded as quite effective against the demon. The performance may have to be repeated two or three times, and if unsuccessful the hopeless sufferer must be killed in order to escape the devil. There are several "doctors," among whom Assoone, the chief, is the "star." Formerly girls and women were thus gifted, but at present men only are possessed of this power. The "doctor" has to be skillful as a ventriloquist and apt at legerdemain. He is a trick performer, claiming to fly like a bird and to go far underground. He will seem to stab himself, and blood will flow, but death will not ensue. Formerly some of them pretended that they would not die if shot. Their performances take place either in a darkened or very dimly lighted room. In receiving the devil into his body Assoone shrieked and yelled and whined and "clawed" my ribs, for I sat next to him, and he sought to terrify me by his cries and attentions. In driving out the devil, he put his "parky" over his shoulders and back, not tying it, and then he bade me take hold of it while he moved off "on all fours." The

"parky" clung to his bare skin because of the perspiration, and so held firm when drawn laterally over it. The people regarded the feat as remarkable, and did not relish it when Abrahamsen exposed it.

ESCHATOLOGICAL TRADITIONS.

It is believed that long ago all persons passed at death to the devil's house. They were piled one on top of another as sailors are arranged in the bunks of a forecastle. The bodies which were on top suffered decomposition during the summer, and caused pain to the spirits that possessed them. Later it was understood that anyone who would die by hanging at the hands of his relatives or friends would thereby escape the devil's house, and float through the air in the sky. These spirits would frequently be killed by arrows shot upward from the bows of the natives, and would then be received into God's house. Later, a man would be received by God into his house straightway if he committed suicide by plunging a knife into his body, or by shooting himself with a gun, or allowing his relatives or friends to kill him. I think that the first part of this tradition indicates that formerly dead bodies were interred at this place. The reference to the spirits becoming as clouds possibly marks the change from sepulture to the present method of placing dead bodies on the slope of the mountain.

DEVELOPMENT OF COD FISHING.

Abrahamsen, who was formerly a fisherman in the Loffoden Islands, Norway, regards the codfish in the Bering Sea near St. Lawrence Island, as the same species as that found in the waters along the coast of Norway. He thought that the prevalence of fog during the summer season might interfere, however, with cod fishing. Mr. Kjellmann, the superintendent of the Eaton Reindeer Station, has very carefully investigated the fisheries problem in the Bering Sea, and told me that the prospect is brighter than that of the situation in Norway, which is saying a great deal. A few years ago he was ready to act as manager of a large fishing enterprise in the Bering Sea, and was diverted by his appointment as superintendent of the Port Clarence Reindeer Station. I am of the opinion that the cod fishing in the Bering Sea could be most profitably developed in view of the fact that the fish would find a ready market in Alaska among the prospectors, if not elsewhere.

Furthermore, I believe that a large number of the Alaskan Eskimos could be greatly benefited if employed as fishermen. Of course, if the Eskimos are to be aided in the immediate future by receiving from the Government herds of reindeer they would not require any further assistance from our Government. If, however, only the few are to be thus benefited, I think that the others could be induced to leave the mainland and take up their abode on St. Lawrence Island and engage

in cod fishing. Gambell is an excellent site for a large village. If necessary, several thousands of inhabitants could reside there. A very large fresh-water lake is not the sole attraction. Either the Government, in the interest of its protégés, the Eskimos, could develop the cod fishing, making St. Lawrence Island the headquarters and employing a man like Mr. Kjellmann or someone else familiar with the whole conduct of a fishing enterprise, and employ thirty or forty Norwegians or other experienced fishermen equipped with the proper craft, nets, lines, hooks, etc., with Eskimos for crews, or private capital could promote such an enterprise. The native could be paid a proper wage for services. At present the Eskimos in Alaska are threatened with extermination, not being able to adapt themselves very well to the conditions incident upon the influx of prospectors among them. The food problem is a very serious one, but strong drink and vice are greater evils. If properly surrounded by Government protection on St. Lawrence Island, I have no doubt that this race would have a longer lease of life. Not only should the interest of humanity impel our Government to protect our protégés, who have no small claim upon the people of the United States, in view of the fact that American whalers and sealers have very considerably despoiled them of their food supply, notably whales, walruses, and seals. Codfish, when salted, would form a staple food for the Eskimos on St. Lawrence Island. The cod could be cured by exposure to the sun, according to Mr. Kjellmann, on the mainland of Alaska, near Unalaklik.

LOG BOOK, ST. LAWRENCE ISLAND.

By WILLIAM FURMAN DOTY, *Teacher.*

August 14, 1898: Arrived on the *Del Norte* after a voyage of fifty days. Drs. Jackson and Gambell, Mr. Brevig, and I were kept busy during several hours superintending the unloading of supplies, a portion of which belonged to me, while a larger part by far were the Government stores which could not be left as originally intended at Perkins, Siberia. Permission was given to me to purchase part of these goods, in order to trade with the natives. A signboard with the name "Gambell" painted on it was placed on the front face of the station building, to the end that the village might thereafter be designated in honor of the noble missionaries, the late Mr. Gambell and wife. There were many expressions on the part of the people, in broken English, of veneration for the character of their two benefactors, whose loss they sincerely mourned.

Jeremias Abrahamsen, a Norwegian who had come over with the "Lapp party" last March, has been left with me as "helper." We are the only two Caucasians at this place, and probably the only ones on the entire island, since the *Del Norte* steamed away this evening.

August 15: Abrahamsen and I cleaned a portion of the coal house preparatory to storing there the 45 tons of coal belonging to the Government.

August 16: Employed possibly 70 persons in all to "pack" the coal from the beach to the coal house. Abrahamsen directed operations on the beach, while I managed the stowing away of the coal and at the same time "kept tally" for each carrier.

August 18: Fifteen men were engaged to help Abrahamsen and myself in removing some Government supplies, which had been temporarily placed in the schoolroom, to the storehouse.

August 19: Cleaned house.

August 21: Sunday school was held in the afternoon. The attendance was probably about 100 persons of all ages. The children sang some gospel hymns which my predecessor had taught them, and evidently they enjoyed that part of the service greatly.

August 22: Began a week of trading with the natives at their very urgent request, for we were "settled," as the schoolhouse and other

structures of minor importance connected with the mission had been cleaned and everything "put to rights" as well as two men could do it, but would hardly bear inspection from the more observant eye of a feminine housekeeper. One of the qualifications of a Government teacher, as viewed from the stand of the Eskimos, is that he should be a trader on an ample scale. Trade facilities are open to the natives in connection with whalemens and traders only during a very brief period in the summer. Accordingly, to have a trader who has some consideration for "the other" during the whole year is really a great boon to the isolated people in this and other Eskimo communities.

I began, by the help of Abrahamsen, to minister to the sick. Sores, costiveness, throat and lung diseases, cuts from rusty knives, and the "stomach ache" are the complaints which one meets here as a rule. It were well if the teacher in such a station as this had a thorough training in a medical college previous to his advent among a people so dependent upon him for medical advice. The native diagnosis of a sick person invariably is summarized in the single symptom "a devil inside," and the treatment is to attempt by aid of the native doctor to drive out the devil.

September 1: Hoisted flag and began school. Twenty-five boys were present, with no representation of the gentler sex. I observed that the children had a tendency to be very hilarious and boisterous, which would require gentle but firm discipline if any order at all were to be maintained, and any real work accomplished.

The attendance of a number of the children was not possible, as they were detained by other and evidently more pressing duties. Especially was this the case with the girls, who were obliged to pick blueberries.

September 2: A test revealed the fact that four or five of the scholars had been advanced to multiplication. The advanced pupils, however, had forgotten a vast deal of their instruction. It was surprising to me to hear some of them read, quite fluently, in fact, from their Second Readers; and to hear them speak English at times to me, which, if ungrammatical, at least revealed the hold that their previous vocabulary had taken upon their young minds. The great majority of the pupils had not advanced appreciably beyond the "a b c" stage. I can imagine how herculean was the task to which Mr. V. C. Gambell set himself three years ago, and I desire to testify to his great capacity as an instructor under circumstances that would no doubt have appeared to a less stalwart nature hopelessly discouraging. It would seem as scarcely more difficult to instruct the minds of persons on a different sphere as to educate the children on St. Lawrence Island. Their life is so diametrically opposite to that of the civilized person, to find a common ground is exceedingly difficult.

September 3: An exceedingly painful throat affection has rendered me quite forlorn to-day.

September 8: Convalescent from the throat affection, which had been causing me sleepless nights and restless days since the 3d instant. Some diphtheria medicine, which I brought with me from home, gave me relief at length. The disease may not have been diphtheria, however, although some of the symptoms seemed to hint that dreadful name; but, of course, to a person who has passed through three attacks of that malady no special alarm would be occasioned by its fourth onset. I should have been grateful for medical advice, however. As it was, my Norwegian helper, although very willing to render aid, could not understand my wants, as he had not acquired a very large vocabulary in English during our brief acquaintance.

September 9: The *Katherine Suddons*, Captain Dickey, anchored off the west shore in the afternoon. The pleasure of entertaining him for even a half hour at the station was memorable to me for many days, for during the previous three weeks I had been longing to see a sail and to talk to an English-speaking man.

The Gambell supplies were landed through a rather dangerous surf. Sent letters off. The vessel had been in the Arctic Ocean, so the captain could give me neither mail nor news.

September 10: With the help of Abrahamsen, I rearranged the goods in the storehouse so as to admit the Gambell supplies, which had been sheltered over night in the schoolroom.

September 11: Sunday school was held. The women and children attended in large numbers, but the men were away fishing. Sunday is observed, I think, if other duties appertaining to the household larder do not conflict. I sought to impress upon them the stricter observance of the Lord's Day, but at the same time reminded them that if it were really necessary to seek food on that day, by all means do the duty that seems to be the more imperative. I was certain that if other days during the week had been stormy so that the canoes could not venture out through the surf, and if a calm day occurred on a succeeding Sabbath, then surely they would be pardoned for seeking food on that day for their household.

September 12: The thermometer has been registering 40° on the average for some days past. I am sorry that the thermometers are not in proper condition to admit of careful observation. There is no barometer, moreover, nor a rain gauge.

The sea has been rough most of the time of late and so fishing has practically ceased. The sun never shines at this place with sufficient power to thoroughly dry fish, so that after a very short time they are advanced toward decomposition. It may be, however, that the fish are not exposed to the sun sufficiently long.

September 13: Traded for two small Eskimo dog puppies.

September 14: Some girls redeemed their sex from the stigma of an apparently hopeless condition of illiteracy by attending school to-day. They were very shy.

Abrahamsen built a dog house.

September 15: Accompanied by some boys, I explored the plateau of the neighboring mountain, a long promontory known as Cape Chibukuk. Was surprised at the sure-footedness and activity of the boys. Saw some thin ice up there.

September 16: Thermometer, 37°; fine snow fell at times.

September 23: The attendance at school was "slim" to-day, as a large number of boys were obliged to help their fathers construct winter houses. The attendance in one day during the past week reached the maximum—forty-eight.

September 24: Snow fell. Abrahamsen and I looked for ships, through a telescope, on top of the mountain, but did not see any. The snow-covered mountain at Indian Point, Siberia, 40 miles across the water, shone resplendent in the sunlight.

September 25: At Sunday school, "Captain Jack," in his efforts to interpret my remarks about truth telling, evidently was greatly embarrassed, as some of the people appeared to enjoy the joke of a man having the reputation of "two tongues" being obliged to impart the duty of honest speech to his neighbor. He is an Indian Point native, and has an unsavory reputation, but as he understands English better than anyone else here I have used him occasionally as an interpreter. English is not understood well by anyone in the place, I may add, and no doubt a large portion of my remarks consequently fails to reach the minds of the auditors.

September 28: Snow fell. A walrus and two seals were killed. I had a ride on a sled drawn by Eskimo dogs, a very novel experience for me, and softened my heart toward the discordant howlers. The dog is really a valuable aid to his master, carrying him on his sled to the distant hunting grounds. Five or six dogs are hitched side by side to one sled as a rule. The thermometer indicated a freezing temperature to-day.

September 30: I was sorry to hear that whisky making has been in progress for some time here of late. I had "proof positive," as my informant, none other than the well-seasoned "Captain Jack," was himself at the moment of communication thoroughly saturated with the drug. I had therefore the necessity of convicting him against his protestations of innocence, and then of warning him that a repetition would sever the slight tie of friendship which existed between us.

It happens that the native wife of a Portuguese trader, who had taken up his residence here two years ago, after leaving Port Barrow,

had instructed the natives here how to make a whisky concoction out of flour and molasses or sugar. The old men have become quite addicted to it, but the young men, strange to say, and to their credit be it said, have not as a rule succumbed to the evil habit.

October 1: The most superb day that I have ever seen, as far back as memory could recall. The contrast between the snow on the hill and the green water, as seen from the shore, was very fine. Took a walk down the coast for several miles. A mirage gave to the Siberian Mountains a greatly heightened elevation from my view point. The deep blue of the zenith was beautiful.

October 2: Sunday school; a schoolboy, in the absence of more competent interpreters, did his best to convey my brief remarks to the other auditors.

October 6: The attendance at school has been very irregular all along. The food problem is a most serious one here, so that even the children have to take up part of the burden of the household support. They trap, and shoot ducks and gulls, and gather kelp and sea urchins washed ashore on the bay east of the mountain. Wood gathering at the same place frequently occupies their attention. None of the pupils stay during the whole period of the school session; but after three hours, as a rule, nearly all disappear, while others, belated, enter upon their daily school tasks instead of the delinquents. The small size of the schoolroom, which can hold really only about twenty pupils for satisfactory school work, may have been partly to blame for the attendance of only a small number of the children. It would be impossible to put into the room even one more table.

The food problem is doubtless the main cause for the detention of the pupils from school. I have been frequently asked to supply the children with food gratis, at my own expense. It is time, however, to disabuse the mind of both parents and children here that school attendance entitles the pupil to any award of food and the present of other gifts. Dr. Jackson indicated to me very emphatically that I must not comply with their requests, and from a consideration of economy, as well as from a personal indorsement of the principle involved in creating a "proletariat" at this place, I have strictly maintained this policy. While the result has been a considerable decrease in the attendance as compared with that during the previous term, I am sure that it is one of the most valuable lessons—I refer to independence—that the pupil and his parents could learn in connection with the Government school. In confirmation of this view of the situation is the frequent repetition of a request for a present on the part of the boy who has attended school for two or three days after a long absence, and his markedly long absence after his request was politely, albeit firmly, denied.

October 8: Myukuk, an Indian Point native, under the influence of strong drink, tried to batter down one of the doors of the house with a large rock last night.

October 11: Tried to persuade Shoolook to abandon his purpose of becoming a bigamist. Several natives here have two wives. In Siberia the custom not only of bigamy is quite common, but even polygamy, I am told. The excuse offered is that a man likes to have a number of women constantly ready with their needles to sew for him, so that he can maintain trading enterprises on a grand scale.

October 14: Snow fell during the night.

October 15: Boarded the *Alaska*, Captain Cogan, which was "lying to" about 1 mile from shore. Had a very pleasant conversation with the captain and Mr. Wood. Sent letters in their care.

October 17: A whaler "hove to" about 1 mile from shore in the afternoon, but on account of the high surf I did not venture upon the sea, nor did anyone from the vessel attempt to call at the station.

Have received no mail since my arrival and no news about the war with Spain. The severance of the ties that bound me so closely to kindred, country, and friends is as complete as the deprivation from mail facilities can make it. One can only hope that all the interests, as well as the persons dear to him, are flourishing, and begin to count the months ere the ships will come from Southern ports on their summer cruise in the Bering Sea and Arctic Ocean.

October 19: School was held as usual. The thermometer registered 29°. The wind blew from the north.

October 20: Ice on the lower end of the lake. This sheet of water is nearly 3 miles long and about 1 mile wide. There are no fish in it, I understand. It serves as an excellent fresh-water reservoir for the community, as nothing pollutes the streams from the mountain that feed it.

October 22: Timkaroo celebrated to-day with a dance called "ola hola." He and his assistants were in festive garments, wearing chaplets on their heads. A feast preceded the tossing of women in a blanket of walrus skins sewed together. One woman in the latter exercise was thrown "foul," and after a swoop of 10 feet or more in the air, fell on the hard ground. Timkaroo forbade me to render any aid to the woman, as he assumed, with no remonstrance from the people, the functions of native doctor. The left clavicle was broken, but pronounced to be healed after a few minutes, during which he placed pebbles under her as she sat on a walrus skin, and kept muttering rapidly about her ears some unknown jargon. Trading later wound up the performance.

October 23: At Sunday school spoke about the "miraculous draught of fishes," making use of an illustrated chart. Abrahamsen and I

responded to the request of the woman who had been injured yesterday, to render her what aid we could. Abrahamsen deserves all the credit, as he acted surgeon and I was only the assistant. His experiences have made him familiar with some "rough and ready" ways of attending to injuries.

October 24: Snow fell. 33°; wind from northwest.

October 26: School as usual. 29°; NW. wind.

October 27: School. 26°; NW. wind.

October 28: A baby was born at Oozuk's house during the night. The little one was very frail, and I was asked to keep an eye on him.

October 29: Treated a number of sick people. 26°.

October 30: Sunday school. Read the biography of Dr. Kenneth Mackenzie, the medical missionary at Tientsin, China. I am glad that my eyes now admit of greater strain than during the past two years. At present I can use them in reading about an hour every day.

October 31: The Eskimos skating on the ice presented a picturesque spectacle. Their skates were of home manufacture. Iron hoops from barrels sharpened and fitted into blocks of wood served their purpose admirably.

November 1: There were many instances of truancy due to the attractions of skating and playing of games on the smooth ice of the lake.

November 2: During a stroll, I saw a very large owl. This bird and ravens, gulls, and ducks are common on this island. In the spring, I am told, sea-quail and sea-pigeons abound, while during the summer snipe are plentiful. Had a ride on a dog-sled home after my walk; and going at full speed down a hill a mile long, my driver managed to upset us and we narrowly escaped serious injuries. I rather pitied the dogs in their strenuous efforts to keep clear of the sled behind them, coasting rapidly at their very heels. Beyond a sprained thumb, I was unhurt.

November 3: The surf was very high. On the whole, the wind has not been so tempestuous during this fall and last summer as is the rule here, according to the statements of the natives. However, there have been occasional "heavy blows" and at those times a correspondingly heavy sea.

November 4: Abrahamsen has been repairing about the house of late, especially fixing stovepipes. Fire occurred on two days recently in the wooden partition between the sitting room and kitchen, owing to a leak in the pipes. They were extinguished promptly after the wood had been cut away by Abrahamsen around the pipes. We were thankful that they occurred in the day rather than at night. 23½°. Snow flurries; cloudy; rough sea; N. E. wind.

November 5: Took a walk for a distance of 14 miles, trying to explore the environs. Shoolook and a boy, Eruk, accompanied me.

A braided cord with tassels, which I had fastened in lieu of a belt around my fur blouse, attracted general attention from the natives. Observed old men and boys gathering seaweed. Many dog teams and sleds were collected at one place on the shore of the bay, while their masters concealed themselves behind rocks or in "blinds" constructed of driftwood and bone from the skeletons of whales, ready to dispatch any unwary seal that showed its head above the water.

November 6: At Sunday school, spoke of the "Fatherhood of God and the Brotherhood of Man."

November 8: A company of Southwest Cape natives visited our village, arriving in the afternoon. I happened to be at the lower end of the lake with a sled party, and altogether it was a fine spectacle to witness the native procession, including 15 or 20 people on sleds, drawn in all by about 80 dogs. They were ceremoniously received at the village, notably by a sham fight, or something that looked like that, on the part of a Massinga native and a Southwest Cape representative. They backed each other alternately at the point of their spears. Both men had festive decorations on their garments. Later, Abrahamsen and I attended the dance at Pazzuk's house, in connection with the trading between the people of the two communities. Even very little girls participated at times. This dance was held in the living apartments of the house, and was in contrast with that observed in connection with the "ola hola." In the latter the large or unheated room of the house was used. Therefore modesty was not violated in a single instance. On this occasion, when the inner heated room was used, men and women were almost in a nude condition, while small children had absolutely no apparel on their persons. I may add, however, that this was no unusual display of the person, as in the living room, all the occupants, as a rule, lay aside their clothing. No indecency seemed to be intended by anyone, nor was the modesty of any one of them shocked.

In contradistinction from other tribes of Eskimos, these Massinga people do not appear to be grossly licentious.

November 9: The carcass of a whale killed probably many months ago in the whaling season went ashore on the rocks down the coast at a place about 5 miles distant from the village. Abrahamsen and I accompanied some of the boys thither, following in the wake of many people who had their dogs draw their canoes on runners. Nearly decomposed as it was, the carcass was welcomed by the people as a great find.

November 10: I was asked to see a very sick school girl named "Poppy," a very nice child, suffering from a fever. I gave her some medicine and some food, such as her stomach might retain.

Had to treat a little baby for "sore mouth." This taxed my powers, for, as a bachelor, I scarcely knew how to diagnose a baby's symptoms.

I mustered all my wits, however, and prepared some liquid food for the "wee bairn," and put up a mouth wash for it.

The parents are very fond of their children, and, as a rule, considerable affection is displayed by the members of a household toward one another. The children do not fight. The boys of the village, moreover, apart from an occasional attempt at a "row," get on together peaceably. The fists are seldom, if ever, called upon to emphasize the taunts or the retorts which the tongue can utter with due vehemence. There is a tendency to ridicule another, but a firm insistence on their proper behavior has saved me, as teacher and trader, from much abuse. To be sure, at times I have had to accept a torrent of imprecation hurled at my head by some dissatisfied person; and have had occasionally to evict such impolite individuals from the house. I do not refer to the school children. Three or four times I have been compelled to dismiss some boy who was guilty of disobedience or of interfering with someone else. That has been the extent of discipline. Boisterous, and at times inclined to be slothful in their school tasks, some of them have certainly been, but they are children of nature, and can not be expected suddenly to wear the "strait-jacket" of decorum.

November 13: At Sunday school I referred to the custom of sacrificing a piece of whale meat to God and to the devil as practiced by the Massinga people, and discouraged it.

It was not easy to convey to their minds that God would not require this small sacrifice from them and that the devil did not deserve it at all.

The people talk to God when they want something like calm weather for a fishing expedition, for instance. The fur mittens are put on then so as to have the under side on top of the hands. I have not yet found evidence of a sense of sin among these people and the need of a redeemer. The devil is feared greatly as likely to interrupt their plans, so they seek to appease his malignity. They do not "wear their hearts upon their sleeves," however, and so I do not know what yearnings and repinings may be theirs in their inner consciousness.

Sickness is attributed to devil possession, and if the efforts of the native doctor to drive the devil away are unavailing the patient prefers to commit suicide or entreats his friends to kill him rather than die from devil possession, for such an unfortunate is believed to go at once to the abode of the big devil and must suffer torments during his after existence, confined always in the devil's house. Have sought to allay these fears on their part.

November 15: School. Snow all day. Abrahamsen and I walked to the other side of the mountain.

November 16: 33°. Snow. Northwest wind; cloudy all day. Gave medicine to a man suffering from a hemorrhage of the lungs.

November 19: Shoolook and I took a ride on a dog sled for a distance of 25 miles, I should judge. Saw Sepilla's house, an underground structure called a "ninglo." I examined it quite carefully.

November 21: Abrahamsen and I, with Shoolook, Montokoly, and Womkone, set out with 3 sleds and about 18 dogs to make a journey to Southwest Cape. A young woman had been accidentally shot in both feet, and a native had asked me to send some medicine to her. I thought that with Abrahamsen as surgeon, I could manage to give some medicine that would relieve her somewhat of blood poisoning.

The trip occupied about ten hours, and appeared to indicate a distance of 40 miles. Abrahamsen worked faithfully, cutting away decayed flesh from the wound which was the worse one, and probed for the shot until the sufferer's fortitude had been exhausted. Then he bandaged it after pouring in arnica. I left two or three kinds of medicine and directions.

I could not sleep in the house where our party remained over night, as the air was "close and very foul" from the breath of six persons crowded with a dog into a room about 10 feet long and 7 feet wide. Went outside very early in the morning and witnessed a magnificent aurora, in trying to see which from the top of a high promontory I nearly lost my life, as the strong gale blew me off my feet and pushed me down the path, which was slippery.

November 22: Our party returned to the station. I was glad to get into my bed after a hard day's journey. To ride on a dog sled is very tiresome; there is no back rest and no place to put one's feet, so they have to dangle over the sides of the sled and come in contact with bowlders and other obstructions.

November 24: "Thanksgiving Day." Passed very quietly.

November 26: "Ola hola" at Oozuk's house; did not attend.

November 27: The natives were excited over several phenomena which appeared to indicate the activity of a volcano not very far off.

November 29: Nukkwon's baby died during the night after a long period of sickness. I had done what I could for it, but at a time when the mother could not nurse it some poorly cooked walrus and seal meat had been given to it, later condensed milk, probably improperly prepared. The abdomen of the baby had enlarged greatly. Emetics and cathartics failed to reduce this "bloated" condition.

Abrahamsen and I attended the funeral. The mother remained at the house, according to the custom here, while the father and four friends acted as pallbearers, carrying the body in a bundle wrapped around by a deerskin and suspended from a pole. The cortége stopped after going a short distance, and the sister cut off the end of the seal ropes which bound the blanketed body to the pole. These rope ends were thrown away, as was the remaining medicine, and with a can she officiated in the final farewell ceremony, rubbing it first twice on her

breast and then on her back, then repeating the same strange rite on the persons of her father and brother. After throwing this can away, she went home with her brother.

The body was placed in the shelter of some rocks about one-third of the way from the base to the top of the mountain. The father sharpened one end of the pole and later thrust it thrice into the naked body of the baby. He may have had only curiosity as his motive, or possibly wanted to make an exit for the devil. It was a horrible sight. After circling around the body, I followed the pallbearers in their studied single file, each man treading in the very tracks left by the father. Later some of the party stepped aside at intervals, but soon assumed their former positions.

November 30: Snowstorm. 8°; northeast wind, strong; cloudy all day.

December 1: School. 5°; strong east wind; snow in the forenoon. Forming ice near the shore on the sea. In the bay ice formed long ago, as the surf there is not high, as a rule; but near the cape and the sand spit the rough waves to a considerable extent defeat the formation of ice, while the strong current also is quite an effective check.

December 8: School. 2°; light east wind. The third finger of my left hand is considerably inflamed on account of a "nip" by the frost. Abrahamsen has been making the shed and the storehouse as secure as possible against the strong winds, which of late have forced snow through very small crevices and chinks in the boards of these buildings.

Began to study the Massinga dialect more systematically than hitherto, having taken a first lesson from Aninga, one of the young men, the oldest pupil at the school. His lameness, due to a white swelling, prevents him from joining other young men in hunting, and he is consequently in an unfortunate position, being a burden to his father. This has brought him into disrepute in the community. His lameness has interfered considerably with his attendance at school since those privileges were accessible to him, and consequently he is not quite so far advanced as three or four of his schoolmates, but he is not occupied as they are frequently, and hence can give his time to me when I desire it. I have agreed with him as to the stipend for his monthly service as interpreter on Sunday and at other times, as well as my native teacher of the language and customs of the people. I can not expect to progress rapidly, as his English vocabulary is very meager indeed, but will hope to compile a vocabulary of the dialect for the use of my successor, which may prove of more or less value to him. Finding no vocabulary of the language at the house has made it hard for me to acquire the language. The schoolboys, after three years only, can not be said as yet to understand even the rudiments of English, and hence give varying equivalents for English

terms when requested to translate into the vernacular. A fur seal was found dead on the ice. The species is exceedingly rare in these waters, I am told.

December 9: School. 8° ; very strong east wind; clear. A clear day is greatly appreciated at this place, at least by myself, as they are very infrequent. Have been attending to the sick, as usual. As I administer drugs and bandage cuts and dress sores daily, I wish that I were possessed of the skill of a professional and not the vague knowledge of an amateur. I have helped some very sick persons, however, in spite of my deficient knowledge of medicine and surgery. Some books here containing emergency methods of treating the sick, which I have consulted from time to time, have been suggestive.

December 11: Sunday school. Light east wind; 16° ; clear. With the exception of the sunrise over the Fairweather Range last June the sunrise this morning was the finest that I have ever seen. In the east and south the color was a brilliant tint of saffron, while in the west and north there was an exquisitely delicate shade of pink, bordered on the underside by a substratum of gorgeous purple. The glistening whiteness of a large ice floe and the rich green of the open water made a fine contrast with the glowing tints in the sky. There was a large attendance at Sunday school.

December 12: Had a conference with the chief, Assoone, with reference to the irregular attendance of the children at school, which was a cause of anxiety to me, as my work in connection with the school had been unsatisfactory in its results, at least to myself.

I requested Assoone, after hearing that the people had no complaint to make with reference to my methods, to inform the community that as the Massinga people had not been called upon by the Government to contribute toward the erection and the maintenance of the school, and the employment of the teacher, and, moreover, no charge was made for the use of books and stationery, it would seem that the parents and the children ought to appreciate this generosity extended toward them. It would be of the utmost advantage, I argued, to the children to become thoroughly grounded in the rudiments of an English training, in view of the fact that in the not distant future a change of residence to the mainland of Alaska might become absolutely necessary on account of the insufficient supply of food on this island; and in that event, in competition with Caucasians who were acquainted with English methods, they would require all the information which this school could in the course of five or six years mete out to them.

December 13: School. 16° ; east and later southeast winds; cloudy. A garment belonging to myself was stolen from the clothesline during the night. A pair of Abrahamsen's mittens disappeared a few days ago, and while one boy was in the act of concealing a pair of mine "A." discovered and exposed the theft.

December 15: School. 28°; light southeast wind; cloudy.

December 16: School. 20°; northeast wind strong; fair.

December 17: Saturday. 10°; snow; very strong northeast gale. The "warm spell" has come to an end. Attended to many sick people.

December 18: A very heavy cold prevented me from holding Sunday school.

December 19: Sick. Could not hold school. The thermometer registered 6° below zero.

December 20: Sick. Unable to hold school. 12° below zero.

December 21: Convalescent, but weak eyes interfered with my desire to resume school. The use of artificial light during the greater part of each school period and my cold together have played havoc with my eyes. The thermometer registered 17° below zero at the stated times of observation, but in the early part of the afternoon 18° below zero. As I had not been out of doors during many days, and feeling restless, I took a 10-mile walk. I succeeded in having my cheeks and nose frost-bitten as well as three fingers on my left hand.

December 22: No school. 16°; light northeast wind; clear, fine day. Gave a Christmas dinner by way of anticipation, as all the people were constantly inquiring of late as to the date of the great holiday. I had representatives from each house bring a bucket and wooden plates to the schoolhouse. Abrahamsen and I then filled the buckets with coffee, and put pork and beans, cakes, candies, nuts, pilot bread, and for the exterior of the body a cake of soap. Probably more than 300 people later partook of the viands.

December 23: Holiday. 19°; northeast wind, very strong; a gale; cloudy.

December 25: Christmas. Held Sunday school. I was pained today because of the long interval both in space and time that separated me from the family circle. It would have been soul refreshing to spend this day as in former years in the sweet fellowship of my kindred.

December 26: School. 10°; northeast wind, moderate; snow.

December 27: School. 10°; very light north wind; fair. Fine sunset and a glorious moonlight afternoon. Treated a number of the boys who were suffering from frostbites on cheeks, noses, and hands. They did not use snow to overcome the frost, which greatly surprised me, and I learned that this excellent remedy is not resorted to at all by the Massinga people. I told them to try it and invariably set the example after one of my members had been "nipped."

December 30: A strong southeast wind brought the mercury up to 31°, which meant a relief to me for a brief space of time in which to give my face and hands a chance to heal from recent severe frostbites.

December 31: Saturday. The thermometer still indicates 31°. The snowstorm which set in yesterday has continued during this day. Spent the time "straightening up" the library and bedroom.

January 1, 1899: New Year's Day. At Sunday school referred to the custom of making new resolutions on this day.

January 2: Monday. Did not make any New Year's calls, as the Massinga ladies are not in the habit of "receiving" on this day. In lieu of reception delicacies, I dined on walrus liver, after it had been cooked about three hours.

Assoone began a five day's feast called Kazzeeva.

Captain Jack, an Indian Point (Siberia) native, has been on a "spree" of late and has tried to batter down the doors of the houses of some of his neighbors, and has carried specious messages to his enemies, purporting to emanate from myself, and as a result this man of "two tongues," although his reputation for falsification is commonly known, has put his enemies evidently to open discomfiture, if not to utter rout. When complaint was made against him, I had to be guarded lest a word from me should cause the two opposing factions in the community to be at "loggerheads," as they appear to have been a year or two ago. I have treated all persons with equal kindness, taking the side of neither party, but urging upon the leaders the duty of and the blessing attendant upon mutual respect and good will. I have purposely refrained from becoming the especial patron of any influential man or set of leading men; I have maintained myself independently of either their favor or their dislike. To establish the Government school on a basis of absolute independence of all other considerations has been my aim all along; and I can fairly claim to have been consistent accordingly in all my relations to the people, bearing in mind at all times my obligations to the community as a whole as paramount to those to individuals.

January 3: Second day of dance at Assoone's house.

January 4: Third day of the dance.

In the evening, in a dark room, Abrahamsen and I listened to Assoone as he shrieked and howled in his effort at "devil chasing." From a supposed high flight in the air, he alighted so heavily upon my left foot as to cause me to question his "power of wings." The company, with the exception of the two Caucasians, were credulous of his sudden dropping down below the surface of the earth as well as his flight aloft.

January 5: After a dance and feast in the morning at the Kazzeeva, the young and middle-aged men and the boys performed the "kip-up" and one or two other simple feats on the walrus ropes which had been tied to uprights. "Tag" and jumping over low obstructions were also indulged in.

January 6: Wrestling contests between the young men followed trading as the "wind up" of the Kazzeeva.

January 7: Saturday. 18°; moderate northeast wind; fair. The ice moved southward.

January 8: Sunday. 16°; northeast wind; strong; fair.

At the request of Aningah, I did not hold Sunday school, as his household had planned for a native dance. I tried to have him postpone the dance. I refused his invitation to attend. To have held Sunday school would have brought out the other faction at my service, while Aningah and the party to which his household adhered would have been absent, and the former set would probably have made capital of this marked division, and this would have compromised me somewhat.

January 12: School. -1° ; northeast wind light; clear. I trimmed my hair and beard.

January 15: Sunday school. -15° ; north wind strong; fair.

January 18: School. -17° ; snow in the morning; north wind strong.

January 20: School could not be held, as the stove "smoked" badly. -16° ; north wind light; clear.

January 22: Sunday school. -17° ; northeast wind strong; snow p. m.

January 23: School. -7° ; northwest wind light; snow a. m.

January 24: No school. -20° ; northeast wind light; clear; coldest day.

January 25: School. -19° ; Northeast wind strong; fair. The thumb of my left hand is greatly inflamed owing to a frostbite.

January 28: Saturday. 30° ; moderate south wind; snow a. m. As the Japan current warms the region in the vicinity of the Aleutian Peninsula and adjacent islands, a south wind, which is rare, invariably brings us warm weather.

January 30: Abrahamsen cut out seal skins in order to make a coat for himself. He was encouraged to do this by his success recently in making a pair of seal-skin trousers.

January 31: School. 30° ; south wind; light snow in afternoon. Assoone began another five days' festival, called "Kazavaghalekkyake." The men wrestled out of doors, bare to the waist.

February 3: 15° and later 35° ; snow. For the first time since winter set in the thermometer registered to-day above the freezing point. The maximum low temperature as observed on the coldest day was 20° below zero. As the thermometer has not an automatic register, it is possible that during the night following that day a slightly lower temperature escaped my observation. The temperature during the months of December and January and generally in the first half of February remained quite constant all day long, as far as I was able to observe the register. The heat of the sun during these months was scarcely appreciable, as the orb was very low toward the horizon during the brief interval of its daily appearance. Thick clouds usually concealed the sun altogether. After spending a winter in the heart of the Adirondack Mountains last year, when the thermometer registered

close upon 40° below zero, I have found the climate on this island very much more severe, due to the moisture and the strong winds.

February 7: School. 10° ; east wind, strong; clear; fine day. Sick all day with a stomach trouble.

February 9: No school. Passed a "trying" night after a sick day. Unable to retain either medicine or food in my stomach; colic severe at intervals.

February 11: Saturday. 10° ; east wind, moderate; cloudy. Convalescent after a severe sickness. Took a short stroll.

February 12: No Sunday school. Only a few spasms of colic to-day. Grateful for my deliverance from severe pain.

February 13: School. 0° ; east wind, moderate; clear.

February 14: School. -5° ; northeast and east winds, light; clear. Abrahamsen shot sixteen ducks. Ducks can be obtained here in small quantities even in the winter, while they are very plentiful at other seasons.

February 15: School. 0° ; calm; clear. Sent some medicine to a Southwest Cape boy, who had been struck with a stone. Fourth day of dance given by Imurigan. Nearly every day a dance is in progress at one or another of the houses. Usually they are not elaborate affairs, and only a few friends and relatives are present. They indicate the completion of bootmaking or some other kind of native manufacture, for the season.

February 18: Saturday. 0° ; north and east winds, light; snow in the forenoon. Of late very few seals have been secured, and the people have suffered for food in consequence. Some households, which had an abundance, however, came to the aid of other families in whom they were interested. It seems to be quite evident that the slaughter of walruses, seals, and whales in the Arctic Ocean and Bering Sea by modern, effective weapons will deprive the Eskimos in the near future of their accustomed food. Famines occur frequently here, and, I fancy, among other Eskimo communities.

February 24: School. -10° ; east wind, very light; cloudless day.

February 25: Saturday. -15° ; northeast wind, very light. Another cloudless day. Had to announce that I could no longer permit the school children to play in the room during recess, as in January and February up to the present date.

February 27: School. 0° ; northeast wind, moderate. Clear all day. During this month there have been many fine days, which were in marked contrast with the cloudy weather that prevailed generally from the time of my arrival, in the middle of August last, until the first of the present month.

I had a long talk with Assoone, the chief and the "leading practitioner" among the native doctors. Aninga interpreted for me. I had been asked to express my credulity or my incredulity in Assoone's

“God-given” powers as a “devil-chaser;” for he had claimed these powers emphatically as bestowed upon him by God. Of course I had to expose his deception, although my arguments fell on deaf ears. Assoone failed to accept my invitation to talk over the matter, and so I had to send messages to him. If he had not made himself enriched at the expense of sick people, one would not so seriously blame him. I tried to appeal to his better nature to give over his superstitions and deceptive practices. To undermine the “devil-chasing” as the main prop of Eskimo superstition has been one of my undertakings. To give hope to the sick and to have all “possessed persons” abandon their fear of the everlasting torment in the devil’s house has seemed to be an incumbent duty upon me. “Shamanism” must first sustain a severe blow before it will give place to Christianity.

February 28: School. -3° ; north and east winds, very light; clear. My puppy was set upon by four other and larger Eskimo dogs and nearly dispatched before I could rescue him. Abrahamsen and I had become attached to this puppy during the two weeks of his sojourn at the house, and were sorry that our efforts to relieve him proved unavailing. He died five hours after the attack. The Eskimo dogs are very ferocious in their onsets upon one another. They are of wolf origin, I understand, at least partly so. Half starved, as they generally are, it is no wonder that they attack weaker ones and devour them. They will eat even offal, so great is their hunger or so coarse their tastes. A man has to defend himself from their attacks frequently. I have been bitten even through a thick fur coat and trousers by one. The bite, however, did not amount to anything, as my clothing protected me considerably.

March 1: School. 0° , -3° ; northeast wind, light; very clear.

March 2: School. -10° , 0° ; calm; clear until evening. Some men were able to go hunting in canoes in the open water near the shore.

March 3: School. 0° ; north wind, light; clear. Some men in a canoe brought back 11 seals, while another party in a canoe secured 5 seals.

March 4: Saturday. 0° , 10° ; southeast wind, very strong; cloudy. Some of the boys and girls coasted down a slope near the west shore.

March 5: Sunday school. 10° , 16° ; heavy fall of snow; big drifts; southeast wind, very strong until evening. Spoke about the call of Moses to deliver the Israelites out of Egypt.

March 6: School. 10° , 19° ; calm until evening, then southeast wind, light; cloudy. Abrahamsen worked hard, as on former occasions, shoveling snow off the roof and away from the entrances and windows of the house. The wind at times forces snow under the sash of the window facing east, in the sitting room.

March 7: School. 5° , 0° , fog in afternoon; strong northeast wind; clear in morning and evening. The hunters went to the east side of the promontory to-day. They dare not venture upon the ice on the north and west shores unless the wind is favorable. The ice moves



from time to time with the shifting of the wind. A hunter usually goes with a dog team and sled, dragging behind a "trailer" for his game. However, some young men who have not a dog team and sled trudge along many a mile, bringing their game back on a "trailer," or, as is frequently the case, dragging it by means of ropes on the ice and snow. The old men and small boys frequently fish through holes in the ice.

March 8: School. -10° , -5° ; northeast wind, strong; clear morning and evening. Began to compose an itinerary of the voyage on the *Del Norte*.

March 9: School. -10° ; northeast wind, strong; clear.

March 10: School. -10° ; northeast wind, strong; clear.

March 11: Saturday. -10° ; northeast wind, light; clear.

March 12: Sunday school. -16° , 0° ; a blizzard from northeast.

March 13: No school. 0° , 30° ; north and northeast winds, very strong. Snowed all day. Great change in temperature during twenty-four hours. Abrahamsen shoveled snow. Only one pupil, Wamhone, presented himself at school, and I dismissed him with a compliment.

March 14: School. 34° , 35° ; southeast wind, very strong; snowed all day. For the second time since the winter set in the thermometer registered to-day above freezing point. Only a very few scholars and did not think it wise to hold an afternoon session.

March 15: School. 30° , 32° ; northeast wind, light; snowed until evening. A number of schoolboys were absent in canoes hunting.

March 16: School. 25° , 30° ; southeast and south winds, moderate. Snow flurries.

March 17: School. 30° ; south and southeast winds, moderate; snow flurries. Many boys were absent from school shoveling snow.

March 18: Saturday. 30° ; south and southeast winds, strong; snowed all day. Open water near the shore on the west side.

March 19: Sunday school. 31° , 32° ; southeast gale; snowed all day. Spoke about the giving of the Ten Commandments. Attended to some sick folks.

March 20: School. 32° ; southwest and southeast winds; moderate; snowed morning and evening. The attendance at school has of late been very small. Dispensed with afternoon session.

March 21: School. 32° , 34° ; southwest wind, quite strong; snowed all day. The conditions of wind, water, and snow have been unfavorable for many days to hunting. The hunters were obliged to keep in their houses.

March 22: School. 34° ; southwest wind, strong; snow flurries. The sky has been overcast during many days past. The weather reminds one of the gloomy days of December. On account of the small attendance I decided for the remainder of the term to omit the afternoon session, and thus give emphasis to the morning period. The

boys could then attend school in the forenoon and shovel snow and attend to other duties in the afternoon.

At Shoolook's request I tried to gain admission to Kenaak's house in order to do what I could to help his sick wife. A large number of persons were in the outer room and they told me not to enter the living room, where Assoone, the chief, and the most reputable native doctor, was beating his drum loudly and chanting. A woman responded somewhat frantically to his cries, presumably the patient. I felt sorry as I turned away. The excitement, however, sometimes brings about a reaction that is helpful to patients, and so I hoped that the mind would be strengthened and so assist in her recovery. It seemed a pity that her husband would have to render himself poor in paying native-doctor fees.

March 23: School. 34° ; southwest wind, strong; snow and fog. Ice jam on the west shore.

March 24: School. 30° , 32° ; south and southwest winds, light; fair.

March 25: Saturday. 30° , 33° ; southwest wind, strong in evening; snow flurries. The snowfall during this month has been the heaviest of the winter. I "cleaned up" sitting room and bedroom, putting many things in order.

March 26: Sunday school. 30° , 32° ; south and southeast winds, light; foggy. Enak had a hard time, in the absence of Aminga, interpreting my brief remarks.

March 27: School. 30° , 32° ; southwest wind, light, cloudy. There were only five boys, all of them being primary scholars, during the early morning period.

March 28: No school. 10° , 5° ; northeast wind, strong; snowed all day. Five walruses were brought in. One native took his canoe on runners, which was pulled by a dog team, to the east side of the promontory. I attended to some sick people.

March 29: School. 5° , 0° ; northeast gale. Snowed during morning. I was very glad to have 28 pupils at school. I had them prepare some exercises for the inspection of Dr. Jackson when he comes next summer. Shoolook, who had "drummed up" a number of the scholars, was a guest at school. Abrahamsen had to cut a hole through the ice in the lake in order to get water for the house. The people generally melt blocks of ice and hard snow. The hole has to be kept open daily; and at length a new one has to be cut when the old one has closed up tightly after a hard freeze. The ice is about 5 feet thick.

March 30: No school. 5° ; northeast gale; snowed all day. The ceiling near the pipe in the schoolroom smoldered and threatened to cause damage. Abrahamsen had to cut the wood flooring so as to remove the charred part and to give the pipe a "wider berth." Did not hold school, as I thought it would be best to let the fire go out. Betwinphut guided me to Kenaak's house, while I was greatly bewil-

dered in the blinding snowstorm; and he brought me back to the schoolhouse and received a slight token of my appreciation. This storm is a great blizzard.

March 31: No school. 0° , 10° ; northeast wind, strong; snowed all day. As only a very few boys presented themselves at school, I did not hold school.

April 1: Saturday. 5° , 10° ; northeast and north gales. Snowed till evening; then foggy. No one went hunting.

April 2: Sunday school. 5° , 10° ; northeast winds, strong; fair. Treated some sick folks. Climbed up the mountain in the afternoon, until the icy crust became too slippery to stand upon, and then quickly descended.

April 3: School. 10° and 16° ; northeast wind, light; fair. Assoone, the chief, visited the school. Many seals were secured.

April 4: No school. 0° , 10° ; snowed in afternoon; northeast wind, strong; later east wind, moderate. Only five boys assembled for school and I praised them and dismissed them.

April 5: No school. 5° and 16° ; northeast, east, and north winds, light; snowed all day. Kalook was discovered by Abrahamsen having on a pair of the latter's snow glasses, and was promptly relieved of the stolen property. Kalook then complained to me, but as he gave a very confused account through the interpreter in answer to my questions and as Abrahamsen could identify the glasses, I rebuked him for his theft and warned him to steal no more about the premises.

April 6: School. 10° , 20° ; southeast gale; snowed during most of the day. About twenty-five scholars responded to my appeal for a fair attendance, and I held school. Two whales were pursued in the afternoon by four parties in the whaleboats during the severe storm. One whale was hit by the dart from the gun, but effected its escape by going under the ice, which cut the rope.

April 7: School. 20° , 30° ; southeast wind, strong; then southwest wind, light; snowed in morning and evening. A large whale was sighted, but the unfavorable weather prevented a chase.

April 8: Saturday. East and south winds, moderate. Snowed all day. Copied weather report partly.

April 9: Sunday school. 28° , 23° ; southeast and east southeast winds, light; north wind, moderate; cloudy and foggy in forenoon and snowed in evening. Attendance consisted of only a few old men, some women and children, as the others were hunting.

April 10: No school. 10° , 16° ; north wind, light; northeast wind moderate; snowed all day. Only 7 scholars appeared and I sent them away to announce that if 15 appeared on the morrow I would hold school. Took measurements of Oozak's house in order to describe it accurately. Shoolook, by the aid of Aminga, talked over matters with me about the school, feeling sorry that the attendance was so

unsatisfactory, and trying to excuse the children as far as possible. He hoped that the time would never come when the United States Government would withdraw from the village the privilege of the school and the oversight of the community by the teacher. He greatly feared evil consequences if there were no officials here, as the Indian Point natives would then harass the Massinga people as of old. I set his mind at ease by assuring him that he need have no fear that the Government would desert the people, while at the same time I hoped that hereafter the community would endeavor to patronize the school and thereby show their interest and appreciation. I admitted that no doubt many of the children, especially at this time, could not well attend, and yet I believed that a sufficient number could be present to warrant me in holding a school session every day. I stood prepared to do my part if 15 scholars assembled. Abrahamsen traded for a dog.

April 11: School. 12°, 10°; foggy; northeast wind, light. More than 25 scholars presented themselves for instruction. I believe it is best to hold up a high standard, making all possible allowance, of course, for necessary absences.

April 12: No school. 5°, 16°; northeast wind strong in morning, light in afternoon; snow and fog. "Captain Jack" came to interview me about some things which another person alleged I had said to his detriment. I asked him to produce the witness and then we would be able to come to a better understanding. Only 4 boys were ready for school.

April 13: School. 5°, 16°; snow and northeast wind strong in morning; cloudy and light wind in afternoon. The children disappeared at recess, going to the mountain for a slide. Play is more attractive for them, as for some of their white cousins, than study. Have been holding school only during three hours lately in order to allow the scholars to do their tasks about their houses, such as shoveling snow, and fishing near the shore for crabs through holes in the ice. Warned the scholars later that I believed I should have to close school in the near future.

April 14: School. 10°, 18°; east wind, light; clear in afternoon. Had a trial trip in my new kayak which Elanga has just finished for me. Found the ballast too light; nearly upset several times.

April 15: Saturday. 10°, 16°; northeast wind, strong; snowed morning and evening. Abrahamsen carried my kayak to the shore and I made a second trial, finding it more steady than on the previous occasion. "Fram," Abrahamsen's Eskimo pup, perished on his first exploring trip.

April 16: Sunday school. 10°; northeast wind strong, then light; very clear. Treated some sick persons. The natives suffer severely from inflamed eyes, due to the bitter blasts and the glare of the snow. Only a very few wear snow glasses. I have suggested that they blacken

the sides of the nose near the eyes with soot, in order to absorb some of the glaring light, but no one has acted upon the suggestion. It received the same reception evidently as did my advice about using snow for frostbites. Some eye-remedies appear to help the sufferers.

April 17: No school. 0° , 10° ; calm and clear in morning, foggy in the afternoon, and overcast in the evening; with strong winds from east-southeast and southeast. Only 4 scholars presented themselves for school. Turned over some supplies to Shoolook to trade for me with some hungry and needy people. Aminga informed me that the old men attributed the bad weather of late to my kayak trips at this season; they never went in kayaks except in summer time, and believed that it was at other seasons displeasing to the moon god. I said that for the present I would not cause anxiety to these old men, while I sent a message to them to give over their dread of offending the moon god. Abrahamsen scoured the country south of this place, walking probably about 30 miles on skees, to see if there was an abundance of moss.

April 18: No school. 10° , 0° ; northeast wind, strong; snowed in the morning, but was quite clear in the evening. A polar bear was seen but not secured. Only a few scholars were ready for school.

April 19: No school. 10° , 0° ; northeast gale; snowed in afternoon; cleared off in evening. Abrahamsen's left eye was greatly inflamed. It had been in bad condition since Christmas. The exposure on the long walk may have been the immediate cause of the inflammation to-day. Treated his eyes. His other eye went blind, or became nearly powerless, when he was a small boy. Had I known of his disability, I should not have had him make the long exploring trip.

April 20: No school. 0° , 10° ; northeast gale; clear. I was informed before leaving home to undertake this educational work that, in all probability, I could not hold school in the spring after the active hunting began.

April 21: 0° , 10° ; northeast gale violent; clear in forenoon; snowed in evening. Some skins have lately been turned over to Shoolook by persons who had stolen some boards belonging to the Government. No one went hunting. Abrahamsen's eye is better.

April 22: Saturday. 16° , 24° ; northeast gale; snowed all day. Finished taking a census of natives here and at Southwest Cape; find that at this place there are 313 people, and 24 persons at the other village. By aid of Shoolook I wrote down the names and indicated on a large map the important geographical features of the island, marking sites of former villages. It seems that all of the communities save this one and that at Southwest Cape succumbed to a food famine a few years ago; while half of the people at the more fortunate villages perished. The calamity seems to have been general among the Eskimos on the Siberian and Alaskan coasts. It is denied by the natives that whisky was in any way responsible for it.

April 23: Sunday school. 22° , 20° ; northeast gale; snowed all day. Had to announce my inability longer to give cards to the children after Sunday school. Observed some women aiding the men and boys in drawing a whaleboat up the beach over the snow. The women do not hunt.

April 24: 20° , 18° ; northeast wind, strong; snowed morning and evening. A whale was chased, but effected its escape. A baby seal of the large species was secured.

April 25: 10° , 20° ; northeast wind, moderate; clear in forenoon, but snowed in evening. Took a long walk, carrying a loaded repeating rifle with me to be ready against a chance attack from a polar bear. Turned over to Shoolook a supply of flour to trade with hungry people.

April 26: 19° , 30° ; snowed all day; northeast wind, light; later calm. Went in canoe, with four boys, duck shooting. Bagged four, which gratified me, in view of my weak eyesight.

April 27: 28° , 16° ; snowed in morning; north wind, light, then moderate; clear and calm in evening. While duck shooting on the shore ice, sank waist deep through the snow and had some difficulty in extricating myself.

April 28: 27° , 32° ; snowed all day; southeast wind, strong in evening. Tinkaroo killed one big seal. The party returned over a large ice field near the shore, dragging a canoe, assisted by some dogs. It was hard work, but worth the effort.

April 29: Saturday. 30° , 38° ; southwest wind, light; later moderate; calm in evening. Snowed all day. Busy preparing reports.

April 30: Sunday school. 42° , 25° ; southwest wind, light; calm in evening; snow and fog until evening, then nearly clear. A rainbow appeared toward sunset. Welcome to the advent of spring!

May 1: 30° , 37° ; calm and clear, except for a fog one hour in forenoon. Went hunting in a whaleboat with Shoolook and his crew. One seal was secured. I missed my chance to kill a seal by waiting too long, hoping to get a better aim. At a distance a baby whale, a "white" fish, and some big seals were observed. The ice interrupted our progress homeward, and I left the party finally and walked over the ice about 1 mile to the shore. The others came back after a few hours' delay. I was impressed with the amount of toil and the exposure to danger which accompany the hunt for seals and walruses. The Eskimo rows and paddles when there is no wind and takes great risks on the ice.

May 2: 30° , 37° ; south and northeast winds, light; very clear. The ice pack is very thick, but the whaleboats are rowed through "leads." Learned that the Indian Point natives formerly traded opium with the people here, but the supply gave out long ago. I was asked to trade it next year, but explained the deadly nature of the drug and urged the necessity of keeping it away from this community. Whalemen

do not trade it, I understand. Oomylook and his party were unable to get back this evening from their hunting trip east of the promontory, being caught in the ice.

May 3: 20°, 26°; northeast wind, very strong; clear in afternoon. A rescue party taking food went with dog teams and sled to aid Oomylook. The party brought the whaleboat overland several miles by the help of the dogs and runners placed under the boat. Raw walrus meat, to which the Eskimo is accustomed, had sustained the hunting party.

May 4: 20°, 28°; northeast wind, strong; clear. There is open water for a long distance, save a covered stretch near the shore.

May 5: 18°, 22°; north wind, strong; cloudy; snow flurries. Investigated and wrote down some traditions relative to the "ancients" here.

May 6: 22°, 26°; north wind, moderate; clear. Akulky's whaleboat was damaged by a large crest and began to fill. The party was rescued by another hunting crew.

May 7: 18°, 20°; northeast wind, strong, later moderate; cloudy. A severe cough prevented me from holding Sunday school. The men broke up the shore ice in places to get rid of it.

May 8: 28°, 32°; southwest wind, light, later moderate; clear in morning, foggy in afternoon, followed by snow in the evening. Three whales were chased, but not secured. A number of walruses were brought in.

May 9: 32°, 37°; south-southwest wind, light; snowed all day. I observed a woman take the head of a seal, which had been broken into small pieces, and cast it into the sea, according to the custom here. The head of a walrus is merely thrown on the ground. A boy showed me a "stone god," as he termed it—a luck stone, I fancy—which he had found on the shore. Any pretty pebble would thus be a charm, though not a deity, I think.

May 10: 37°, 32°; south-southwest wind, moderate; foggy all day. Timkaroo found a "bowhead whale" of small size which Akulky had struck on the previous day. Being nearly dead, it was quickly dispatched. The bone was divided among the people generally—following the invariable custom—the discoverer and his crew retaining larger shares than those given to their neighbors. The old women, as well as the men, receive a portion.

May 11: 32°, 35°; south-southwest, southeast, and east winds, light; foggy all day. The surf has loosened the shore ice in places. I expect to see ships here within the next ten days.

May 12: 34°, 32°; east gale strong; snowed hard in afternoon. The hunters experienced a rough sea on their return. Two whales were pursued, but not captured. I am still suffering from a severe cold on my chest.

May 13: 29°, 34°; east wind, strong; snow and fog all day. The van of the whaling fleet arrived, consisting of the *Jeanette*, Captain Newth; *Grampus*, Captain Leavitt; *Narwhal*, Captain Comisky. The *Belvedere* passed by later. Went aboard the first three vessels. From Captains Newth and Leavitt I received news of the war, and papers and magazines. The eastern part of the Bering Sea was reported open for the most part. No whales had been secured. Did not get any mail.

May 14: 32°, 33°; east wind, light; foggy all day. The *William Baylies*, Captain Buckler, dropped anchor here and I went aboard. Gave the captain some medicine for an inflamed eye. A cough prevented me from holding Sunday school. "Captain Jack," a native, was very drunk, and when I accused him of it he made his way as quickly as he could to his sister's house, giving me the impression that he was in search of a weapon with which to vent his spite upon me.

May 15: 32°, 37°; northeast wind, light; foggy all day. "Captain Jack," Myookuk, and one or two others, all of the Indian Point (Siberia) contingent that has wintered here, attacked the house about midnight, hurling large stones at one of the doors. They were too drunk to accomplish their purpose, however, and expended considerable energy in shouting out menacing threats. Abrahamsen and I had to make ready against their possible intrusion. Earlier in the night, as Abrahamsen entered the house, Wyookuk fired a pistol in the air, close to the house. The Indian Point element ought to be prevented from such attempts, and probably their expulsion alone can guarantee this. The other natives here were oblivious that an assault was in progress upon the school building, and in any event would not want to interfere with Indian Point natives, who are more numerous and better equipped to carry on war than are the natives at this place. Indian Point, in Siberia, is only 40 miles distant from Gambell, and has a population double that of this village, while the deer-men are their allies, furthermore. Again and again in former times the Siberians have nearly exterminated the natives of this island.

May 16: 31°, 34°; northeast wind, light; foggy all day. The *Thrasher*, Captain Sherman (wife and two children), came to anchor. Made one trip to the vessel in my kayak, and two trips in canoes. The *Gambell* canoe capsized in the surf and the men had a narrow escape from drowning. I had to give them medicine to warm them after their cold bath.

May 17: 33°, 38°; northeast wind, light, and snow in the morning. Foggy and calm afterwards.

May 18: 35°, 39°; east and southeast winds, light; foggy or overcast all day. Shoolook went more than halfway to Indian Point in his whaleboat, and reports a large quantity of ice toward the Siberian coast.

May 19: 35°, 33°; northeast and east winds, moderate. Clear in the afternoon. Two parties from Siberia in whaleboats arrived here to-day and paid their respects to me. They understood English quite well, having been associated for long periods with American whalers. One man had been to 'Frisko. The people at Indian Point had lost five or six persons by death during the winter. Some reindeer had perished, unable to get moss on account of the hard frozen snow. At Indian Point, East Cape, South Head, St. Lawrence Bay, and Plover Bay the natives had procured a whale. The Indian Point men, in answer to my questions, informed me that the language of their people and that of the Plover Bay natives is the same as that of the people on St. Lawrence Island; evidently at one time these three peoples were intimately related. There are a few differences in customs, and, doubtless, in the dialects.

May 20: 30°, 36°; east wind, moderate; fog and snow. Was informed by Shoolook that the Indian Point natives reported the disappearance of five hunting parties in whaleboats, chiefly men, of the Plover Bay natives. The captains of the "whalers" had looked in vain for them. They may have been caught in young ice which would not hold them should they try to pull their boats over it, or they may have encountered a rough sea which dashed and broke their boats against large blocks of ice. These men had, in some instances, large families, having two or even three wives. Probably half of the male population of Plover Bay has thus perished.

May 21: 34°; east wind, light; later moderate. Rain in morning followed by fog. I held Sunday school in spite of a bad cough. Only a very few persons were present, the others being absent hunting.

May 22: 35°, 33°; east wind, moderate; foggy until evening, then clear. The *Belvedere*, Captain Duvall, came to anchor. Went on board. Shoolook brought Taninga, an Indian Point chief, to see me. They have been from youth sworn friends, as their fathers were, and it was pleasant to see their mutual regard.

May 23: 34°, 35°; northeast and east winds light in forenoon; fog and snow. Went hunting with Timkaroo and his crew in a whaleboat, and suffered from the cold, as I was too thinly clad. We returned after ten hours, having sailed about 40 miles, I judged. We had no compass, and yet our helmsman Timkaroo, without sight of the sun or shore, kept his bearings on the open sea during eight hours of thick fog. No walruses or seals were brought in, although some of the former were shot at, but missed, owing to the long range and the motion of the whaleboat.

May 24: 33°; calm, snow in morning and evening, fog in afternoon. Read newspapers. Influenza is epidemic here.

May 25: 32°, 33°; east wind very light; snow in morning, fog later.

May 26: 32°, 35°; calm forenoon, northeast wind light, later foggy and cloudy. The *William Baylies* came to anchor in the morning for

the second time. Capt. S. F. Cottle, formerly first mate, announced to me the sad news of the death of Capt. Charles E. Buckler, which occurred off the Diomed Islands about 6 o'clock in the evening of May 24. Instantaneous death followed the discharge of a rifle, self-inflicted, presumably accidental. The two mates narrowly escaped death at the same time. I was requested to hold a Christian burial service over the remains on board the ship and at the grave near the village. A suitable wooden slab was placed so as to designate the grave, bearing the name, age, and date of death of Captain Buckler. The services were attended by the officers, crew, and natives.

May 27: 34°, 33°; northwest wind, light; foggy in forenoon, later cloudy; clearing in the evening. A party from Indian Point in a whaleboat arrived. A tent was pitched; it consisted of the sail. The people are all suffering, like myself, from severe coughs. I have observed that of late a number of them have been sitting on the cold ground, and have advised them of the danger, but they do not appear to attribute it in any wise as a factor in their sickness.

May 28: 36°, 33°; north and east winds, light; rain in forenoon; cloudy later. Sunday school could not be held on account of the general complaint, a bad cough. The *Alexander*, Captain Tilton, anchored off the north shore. I went on board, hoping to receive some mail through him, but again was doomed to disappointment. I admire Captain Tilton's stand against liquor. Was invited and remained for lunch on the vessel. The *Fearless*, Captain McKinney, anchored off the west shore in the evening quite late. Abrahamsen went on board and found a countryman.

May 29: 32°, 38°; east and southeast winds, light to moderate; cloudy forenoon and afternoon; snowed during the evening. Captain McKinney entertained me at dinner on board the *Fearless*. Met a man on the vessel among the seamen who attended the Lawrenceville School and Princeton College while I was a student in those institutions. He had experienced a checkered career of late years.

May 30: 37°, 33°; southeast, east, and northeast winds moderate; snow in morning, clear in afternoon and evening. Have given a vast deal of cough remedies to the people within the last month. The people, like myself, are subject to exposure, however, day after day, and hence recovery is retarded. It is now many long months since I received a letter, on August 2, at St. Michael. No mail has yet come.

May 31: 33°, 36°; northeast wind moderate; overcast all day. Abrahamsen has a cold.

June 1: 30°, 33°; north wind moderate; calm in evening; snowed all day. My cough kept me in the house all day. Prepared part of my general report.

June 2: 30°, 36°, 32°; west wind light; snow and fog. There is ice in large quantities on the sea as far as the eye can reach. Gave Sublat medicine for influenza. Prepared school report.

June 3: 33°, 35°; west wind light, followed by southwest wind moderate; fog and snow. Gave Sablat more medicine. He is very sick.

June 4: 37°, 35°; southwest wind strong; rain and fog. Did not hold Sunday school on account of my cough. Sablat is better. During the night two deaths occurred from influenza—an old man, Tapeezuk, and an infant. I did not know of their illness. Timkaroo and his crew, in a whaleboat, killed 21 walruses, but brought back only the heads with the ivories and the skins.

June 5: 36°, 38°, 33°; southwest wind moderate; fog all day. Stored a large quantity of whalebone and ivory for Assoone, as he did not want to risk losing it by stealth when the Indian Point natives visited this place. The latter people number more than five hundred and have the Deermen as allies, and they have come to this place in summer in former years in whaleboats and terrorized the community, stealing and rioting and threatening to kill. In the past they have nearly exterminated the people of this village repeatedly. Assoone asked me to allow all the children to come to the schoolhouse for protection this time, and I bade him invite the children and the women also, and promised to confer with the chief men of the Indian Point natives and warn them to keep the peace or else suffer serious consequences in the near future.

June 6: 35°, 37°, 33°; west wind strong; fog all day. There is a large quantity of ice on the sea. Treated several persons for influenza, anointing their chests with iodine and giving internal remedies. Had a long talk with a native from Indian Point, convincing him of the urgent necessity of the Siberians refraining from all misdemeanors on their visit this year. I bade him communicate to his people my warning. Loaned Myyookuk a pair of forceps to enable him to extract a tooth. Abrahamsen told me that he observed Akulky one day place all the goods that he had received in trade from a captain of a whaler in front of his door. He threw some flour in the air and some tobacco into a small fire. He next stamped or tramped over his goods, after which he carried them into the house. He was doubtless sacrificing to God and the devil.

June 7: 30°, 34°, 32°; west wind strong; fog all day; an ice jam on the west shore. Treated several sick people.

June 8: 34°, 36°, 34°; west and southwest winds moderate; foggy or overcast all day. Looked after sick people.

June 9: 38°, 33°; calm until evening; then light west wind; foggy or overcast. Noóna, an old man, died during the night from influenza; was not asked to give him medicine while he was sick. A dog was killed at his house later. Kowktan, a woman about 40 years old, was hung at her request by her relatives and friends, in spite of my protests. She had been sick with influenza, and during the past seven days had not slept and could not eat or drink. I did not know of her serious condition until she was being drawn to her death. The woman

was buried on the mountain. A dog was killed at the place where the body was deposited on the mountain side. Yagho, an old woman, also died to-day.

June 10: 34° , 39° , 36° ; southwest wind moderate. Snow forenoon, later overcast. Toosoon, an old woman, died from influenza. I learned of her condition a day or two previously and gave her medicine. Iyoowixan, who is suffering from influenza, is better. The people expose themselves when feverish, in spite of my protests, and regard my medicine of no efficacy when they get worse. Traded for an old Eskimo suit of armor. There are only two in the village. The armor is made of wood covered with thick seal skin. The headpiece is a combination helmet-shield.

June 11: 38° , 46° , 38° ; southwest wind very light; overcast. Did not hold Sunday school, as so many persons were sick. I found Iyoowixan in the cold part of his house and warned him that he would get worse in consequence. Gave him liquid food and medicine.

June 12: 35° , 40° , 34° ; southwest wind moderate; fog all day. Iyoowixan concluded that he must die as he became worse during the night, and, in spite of my earnest pleading, he was put to death, his sister-in-law holding the pistol that fired the fatal shot into his head. He was only about 30 years old, and leaves a wife and baby. Many a sick person, I fancy, among these and other Eskimos, is too quickly killed when medicine and care might be efficacious.

June 13: 34° , 39° , 40° ; southwest wind moderate, later strong; fog all day. Treated Papak, an Indian Point man, who has the influenza. He is old. Urged him to remain in the warm part of his house.

June 14: 36° , 39° , 36° ; southwest wind moderate, later light; fog until evening, then clear. A fine sunset. Papak is better.

June 15: 44° , 44° , 37° ; east wind light; south wind moderate; clear in forenoon, later foggy; the sea is very rough. Abrahamsen fixed a gate and repaired the wire fence which guards the east and south sides of the station.

June 16: 35° , 39° , 34° ; southwest and west winds moderate; a gale from the west in the evening; fog all day; the sea is very rough. The people are storing walrus meat in underground cellars.

June 17: 34° , 39° , 35° ; west wind very strong; fog all day. Learned that the natives make the boots which are to be worn by themselves stronger than the boots which they intend to trade. This is a bad policy. A more serviceable boot given in trade would bring a higher price later.

June 18: 35° , 39° , 35° ; west wind very strong; fog all day. Did not hold Sunday school on account of my cough. The steam schooner *Albion*, Captain Ericson, anchored off the north shore in the morning. Had a pleasant talk with the captain and others on board. Received some papers (but no mail). Declined an invitation to dinner. From

Messrs. Kelly and Siem I learned more fully the plans of Dr. Jackson in reference to reindeer this summer. In making a second attempt later to reach the ship, the skin canoe, which contained a dozen persons, including myself and three dogs, had a narrow escape in the high waves. One wave broke over the gunwale and drenched me. Then the canoe as rapidly as possible was paddled ashore. Teory, Kalook, and Myyookuk shipped on the *Albion* for the summer.

June 19: 36°, 39°, 35°; northeast wind light; calm in evening; fog all day except in afternoon, when it was overcast. Learned that a number of persons who owed me boots could not bring them this year. They will redeem their pledges next year, I understand.

June 20: 36°, 44°, 36°; calm in forenoon; later east, southwest, and south winds moderate; fog or overcast all day. The *William J. Baylies*, Captain Cottle, stopped here all day en route to Unalaska. Sent letters off. Dined with the captain. Received a present of a sack of potatoes from him. The *Alexander*, Captain Tilton, came to anchor later. Captain Cottle and I took supper on the *Alexander*. Enjoyed some music from the graphophone. Received a present of some oranges. Some of the natives also were privileged to hear the music, and enjoyed it greatly. Learned that the five crews that set out from Plover Bay five weeks previously, and which were supposed to have perished, came back after a long delay, having lost only one boat, which was crushed in by the ice. Captain McKinney was reported as very sick with pneumonia near the Diomedes. The fleet had secured four whales. A man and a woman on the Diomedes who were suffering with influenza were put to death, the former by stabbing and the latter by hanging. Captain Cottle handed over to me two letters which had been given to him for me at Cape Prince of Wales. They are the first letters which I have received since my advent on this island, and are doubly welcome, for they are from mother and sister. They bear the date of July 12, 1898.

June 21: 32°, 37°, 36°; east, northeast, and northwest winds moderate. Snowed in early morning; overcast afternoon and foggy in the evening.

June 22: 35°, 39°, 36°; southwest and west winds moderate; fog all day.

June 23: 36°, 39°, 37°; west and southwest winds moderate to strong; fog until evening, then rain.

June 24: 37°, 40°, 37°; southwest wind moderate until evening, then a strong gale; fog all day except in late afternoon, then rain. The surf in the evening was probably higher than 20 feet. The men had to drag their whaleboats high up on the beach to make them secure. Held Sunday school for the first time in many weeks.

June 25: 37°, 40°, 37°; south-southwest and southwest gales strong; rain until evening, then fog.

June 26: 40°, 40°, 38°; southwest and west-southwest winds moderate; cloudy morning; rain in afternoon; clear in evening.

June 27: 40°, 42°, 37°; southwest and south winds moderate; cloudy; rough sea. In the evening the *Alaska* anchored off the north shore. I went aboard and learned that Captain Williams had brought the bark up, as Captain Cogan was sick. Received two letters from my brother and one from Mr. Spriggs, my classmate at Princeton University and Seminary, who announced that he and his bride were en route to Point Barrow as missionaries. Remained up all night tallying freight for the Government and for my successor, Dr. Gambell. Was glad to learn that a commodious school building would be erected here this summer. Abrahamsen attended to the freight on shore and stored the merchandise. Was glad to meet Mrs. Hadley, a friend, en route to Kotzebue Sound as a missionary. I saw the sunrise shortly after 2 a. m.

June 28: 40°, 41°, 41°; south wind moderate; west-southwest wind light; clear in afternoon. Left the *Alaska* about 7 a. m. Stored the lumber for the new schoolhouse. Abrahamsen was of great service to me by reason of his practical experience with lumber in former years. I employed a large number of people to carry the boards from the shore to the yard.

June 29: 41°, 42°, 39°; southwest and west winds light; fog all day. Copied journal in part.

June 30: 44°, 43°, 39°; west and southwest winds moderate; foggy and cloudy; clear in afternoon. Two parties in whaleboats arrived this morning—St. Lawrence Island natives on their return from Indian Point. They had spent about forty-eight hours on the water and had a rough passage. They reported the kindness of Captain Tilton, who took them over some days ago, in rescuing one of their boats when the line that held it broke in a very rough sea. He sent some of his crew after it. About 20 persons at Indian Point died from influenza recently, one of them being the father—Oyecaguk—of Papak, who attended school here this last year. The Indian Point natives have about given over their purpose to visit this village this summer on account of the rough sea generally. I understand that the people here need about 600 deer skins for clothes next winter, and shall request Lieutenant Jarvis to arrange for the trade if possible. The people understand me better now, and I also know how to appreciate them more. About 60 persons among the “deermen” in the vicinity of Indian Point succumbed to the influenza lately. I traded for some flowers to-day, the first of the season.

July 1: 40°, 47°, 40°; southwest winds moderate, and south gale in evening; cloudy, rain in evening. Oozuk and Toosuk, with their crews, started for Indian Point in whaleboats.

July 2: 40°, 42°, 40°: northeast wind moderate, later light; calm in evening, foggy until evening, then clear. Nowgoshluk died.

July 3: 46°, 46°, 40°: southeast, south, and southwest winds light to moderate; clear in forenoon, later foggy. Learned that Nowgoshluk had been a sufferer from inflammation in the bladder, and had, moreover, been blind for many years. He had his friends place a rifle near him so that he could discharge it fatally, and thus took his life last night. This is honorable according to the Massingua customs.

July 4: 43°, 46°, 40°: southwest, west, and southwest winds moderate. Fog and mist. Celebrated the 4th by an address to the people and by giving them a dinner, and to the children some flags. In the contest with rifles, fifteen shots were placed in the bull's-eye at a fair range. Abrahamsen helped me pack some souvenirs in boxes.

July 5: 40°, 44°, 40°: southwest and west winds moderate; fog all day. Packed trunks, expecting to leave at any time.

July 6: 49°, 48°, 44°: west and southwest winds moderate; fog until evening, then clear.

July 7: 48°, 50°, 55°: south wind moderate to light; clear until evening, then overcast.

July 8: 46°, 50°, 52°: west and south winds light; southwest moderate; fog all day. Akotan, after suffering from hemorrhages from the lungs for some time past, died.

July 9: 47°, 47°, 42°: southwest wind moderate; fog, rain, and mist. The schoolroom could not be used for Sunday school, as it was still filled with Government lumber that could not be exposed to the elements, and there was no other place in which it could be stored.

July 10: Captain Buhner brought the *Thetis*, United States revenue cutter, to anchor about 10 a. m. He and Lieutenant Hamlet received from me a portion of the supplies stored here by Dr. Sheldon Jackson last summer. They will be used in trading for reindeer. Received no letters.

July 12: Wednesday. Oozuk gave a dance in the cleared space in front of the schoolhouse. The men and boys first ran round in a circle, some having walking sticks with them. After all of the runners had become tired, a walrus skin was laid on the ground and food was placed thereon, having been brought by Oozuk's household and relatives. The old men then partook of a feast, reindeer meat and Russian tobacco being the delicacies. The women were then tossed in skins.

Captain Jack brought his little girl to the house later and asked me to trade for a pair of baby boots, which I did, in order to give the child some food. He then said that Oozuk had brought some whisky over from Siberia, which had been given to him by Aminga. He claimed that Oozuk had treated his friends, among others Shoolook and Captain Jack. I noticed the smell of liquor on Captain Jack's

breath, and rebuked him for drinking it. Then I closed the door. I went to see Shoolook and Oozuk, and both denied having received or given any whisky. Taminga and Oozuk are not friends. Hearing that Captain Jack contemplated making a trip to Indian Point that day, I said to Shoolook and Oozuk that the people had better say to Captain Jack that he must not return to the island, but take up his residence elsewhere, as he had been for a long time a drunkard, a liar, and a false witness. He was a polluter of the morals of the community. As he was really a Siberian, he ought to be ostracized. I went to Captain Jack and told him that he had told me a falsehood with reference to Oozuk and Shoolook, and that as long as he was going to Indian Point he had better remain there. His attempt to break down one of the doors of my house rendered him culpable when the *Bear* should arrive. I told him that his evil course had bereft him of friends at St. Lawrence Island, and now he had better seek a new home. He accused me of crowding him and said he had bullets, and got up and brandished his fists at me, coming close, but I did not retreat. Then he went back and drew his knife, and was seized by others as he came toward me, evidently intent on killing me. He struggled to get away from his captors, and called on me to help him, crying out that they were attempting to kill him. Shortly thereafter I walked to my house, wondering if Jack would execute his threats with reference to the bullets.

Later Toosik, Shoolook, Aminga, and Assoone came to me and made an apology in behalf of the people. Jack's knife had been secured, and I was told that he would be guarded.

The *Bear*, Lieutenant Jarvis in command, came in the evening, and Dr. Jackson and Lieutenant Berthoff came ashore, and Jack was finally arrested and put in irons on board the *Bear*, to appear before the judge at St. Michael.

Abrahamsen and I were invited to take passage on the *Bear*, and gladly did so. Said good-bye to the people, hoping to meet them again some time, and rejoiced that my duty was done on the island and that I could now go home.

WILLIAM FURMAN DOTY.

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MAP
OF
BERING SEA COAST
OF
KAMTSCHATKA AND SIBERIA

FROM U. S. HYDROGRAPHIC CHART No. 68.
TO ACCOMPANY REINDEER REPORT OF
SHELDON JACKSON
U. S. General Agent of Education in Alaska.
1899.

Hights in Feet.

